TEXTILE WORLD

A McGraw-Hill Publication ---------- FEBRUARY • 1946

FEB 27 1946

CHANGING TEMPO IN TEXTILES

Page 101

COMMERCIAL FACTORS CORPORATION

Fred'k Vietor & Achelis, Inc. Established 1828 | Schefer, Schramm & Vogel Established 1838 | Peierls, Buhler & Co., Inc. Established 1893

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Super High Speed Looms

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Are you preparing proper operating conditions for your New Super High Speed Looms?

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- ☐ Loom stoppage Tests on your Present Looms
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- ☐ Slasher Operating Conditions—Particularly Automatic Controls
- ☐ Yarn Quality—Check Stoppage Test Report
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GET THE FACTS—To Point the way to Improved Methods and Increased Production

Let's Talk It Over

Series X

DRAPER CORPORATION
Hopedale Massachusetts

75% LESS FLY AND DUST

NO CARD LOADING

EASIER STRIPPING

SMOOTHER YARN

ASSURED

with TEXSPRAY FIBRE CONDITIONING

TEXACO Texspray Compound softens brittle fibres, prevents breakage of long staple, reduces ends down, helps maintain a uniform yarn count. Its use minimizes static, and reduces "eyebrows." *Texspray Compound* has improved both yarn quality and production efficiency in leading mills for more than ten years.

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Reduced fire hazard is another important benefit of Texspray Fibre Conditioning. There is no atomization of the conditioner by compressed air, consequently no hazardous lint-collecting film on machinery and walls.

You can enjoy the benefits of Texspray Fibre Conditioning if your mill is located anywhere in the principal textile areas of the U. S. Call the nearest of the more than 2300 Texaco distributing plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

This 20-page illustrated booklet tells the whole story. Write today for your copy of "FIBRE CONDITIONING WITH TEXSPRAY COMPOUND."

TEXACO

REG T M

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

TUNE IN THE TEXACO STAR THEATRE WITH JAMES MELTON SUNDAY NIGHTS ★ METROPOLITAN OPERA BROADCASTS SATURDAY AFTERNOONS

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Classified According to Reader Interest

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THE *Long-Range* VIEW

INFLATION ANTIDOTE

As practically every good economist will tell you, the antidote for inflation is high production. Often the difference between losing money and making money is the volume of production. To prevent the disaster that would inevitably follow runaway inflation, our huge textile industry can be a leader.

We all have heard plenty of individual excuses for not producing more. A machine operator thinks, "Why work hard today to earn more money? I'm going to get another raise soon anyhow." A supervisor thinks, "So what if my production is low and costs are high? The company is making plenty of money." The company official thinks, "Why should I make that fabric at a small profit when only half as much of another will net me the same amount?"

All such thinking is not only standing in the way of the welfare of the country but directly in the way of the specific individuals. The worker is simply losing money every day; the supervisor is riding for a fall; the mill official is failing to cultivate sound markets while clinging to abnormal ones.

Of course, there are many other obstructions to high production, mainly the scarcity of materials and supplies (except natural fibers) and labor shortages. During the war, these items were even scarcer; yet more production was turned out. With our large stocks of cotton and wool, we are basically in good condition to reach new highs in production, even higher than anything during the war.

Not only the United States but also the whole world is crying for textiles. If we do not meet demands for textiles, we are increasing the incentives for mills to be built outside the United States, mills which not only will cut off possible exports in the future but also may eventually send goods into the United States and shut down our mills. Even if such a future should be inevitable —and it is not—our large-scale production of textiles now would delay its coming.

All branches of the textile industry can do more than they are doing to increase production, but the opportunities for greater volume are best for cotton mills. Production of textiles, as pointed out in the Review and Forecast Section of this issue, has dropped 12½% from the peak year 1942—an over-all drop which is attributable almost entirely to a decreased volume of cotton fabrics produced. Cotton consumption is 19% below the 1942 peak. The reason for the shortage is certainly not lack of fiber. Precise grades wanted may not always be available; but surely our cotton technologists can adapt new grades, especially in view of all the information that has come to light and all the help that can be had on recognizing, evaluating, and utilizing properties of the various cottons.

Cotton spokesmen proclaim the need for additional markets for cotton, the need for reducing the inroads of synthetics. To get desired increase in production we cannot depend on subsidies from Congress or directives from the President, nor hope for miracles. Those who might look to the government for solutions to textile problems can take warning by what is happening to English textiles. A 15 to 20% increase in labor costs now confronts Lancashire cotton spinners if the recommendations of the Evershed report are carried out, and a committee proposes to do for the industry what mill operators are blamed with failing to do.

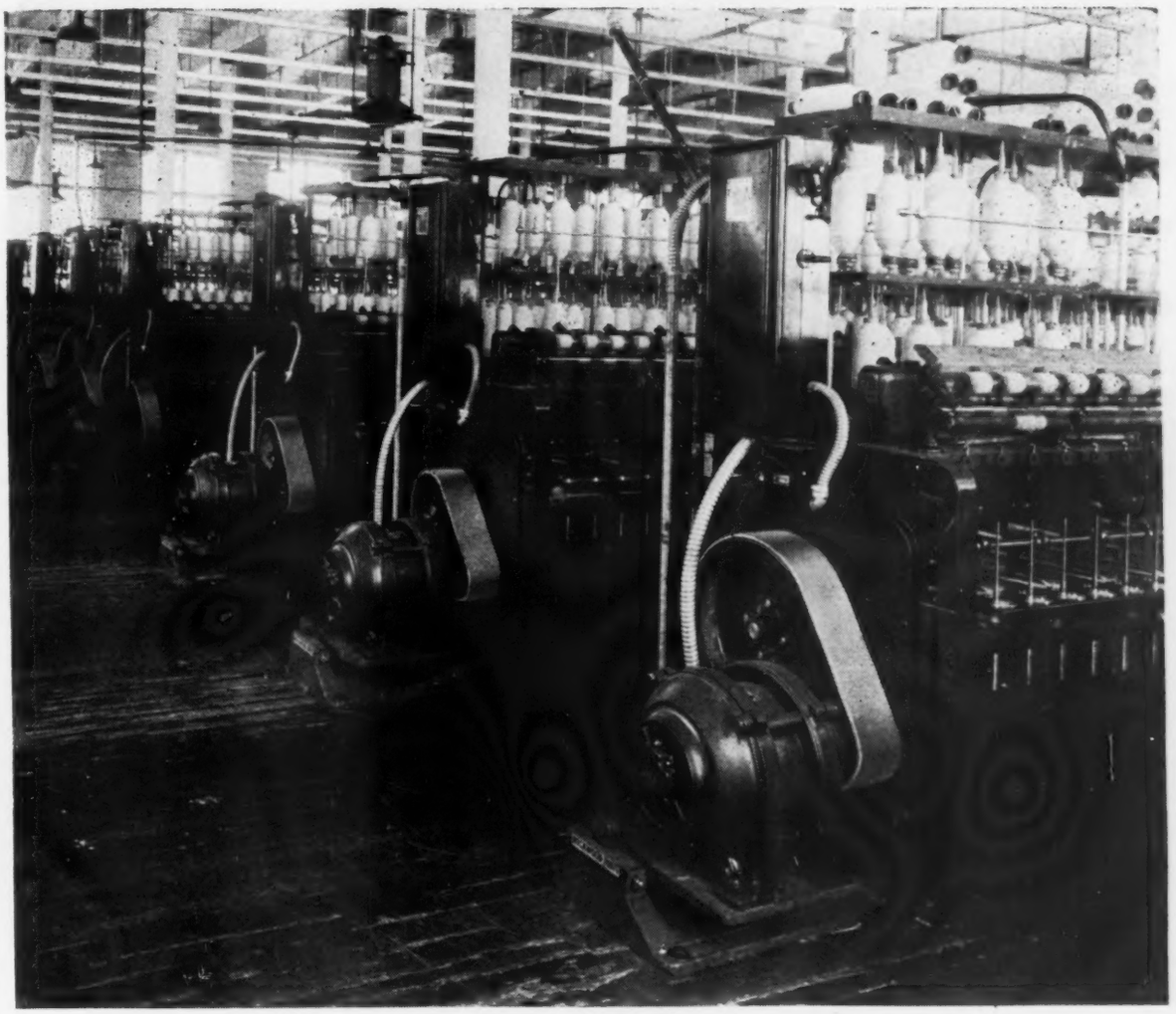
No, increased millions of yards needed must come from actions taken by men directly responsible for the manufacture of textiles.

We seem slow to realize our ability to outpace the balance of the world in efficiency in manufacturing textiles, despite many indications that we can, such as the Platt report which showed many instances of U. S. costs being much lower than the English, regardless of higher wages. We enjoy many economies as the result of vertical integrations and mass production which manufacturers from other countries will be slow to adopt because of the volume of capital required.

The essential step now needed is the same one that will go far toward solving our present national (and personal) problems—new highs in productivity both now by better utilization of our equipment and later as a result of plant modernizations.

C. H. Bendigo

To Keep Drive Efficiency Up
Consult RHOADS ENGINEERING SERVICE



Rhoads Engineering Service, based on long specialization in the manufacture and application of leather belting, has helped many textile manufacturers to secure real savings and lowered cost per yard of cloth through increased efficiency of their drives. We can help you too, in planning a new drive or changing an old one.

Tannate-Rockwood drives have proved their exceptional reliability during recent years in maximum production. Tannate belts have unusual grip. They resist moisture, machine oils and many weak chemicals. Little maintenance is required to assure long life.

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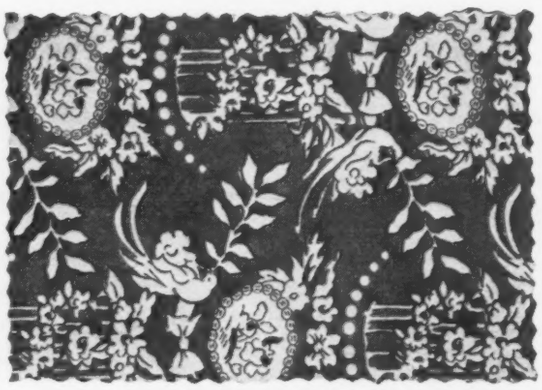
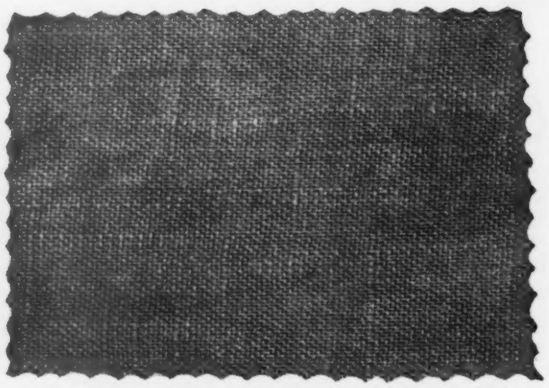
NEW YORK CHICAGO ATLANTA



SYNTHETIC PRINT CLOTH 62 x 50 20/1 Warp and Filling



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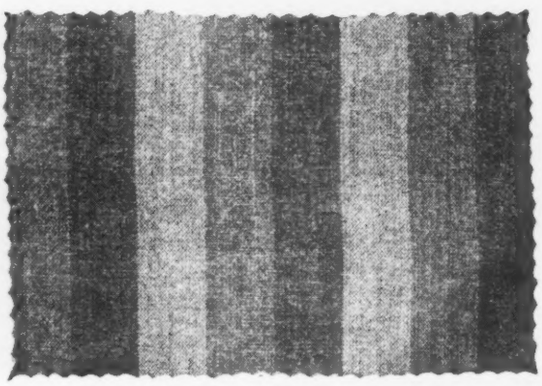

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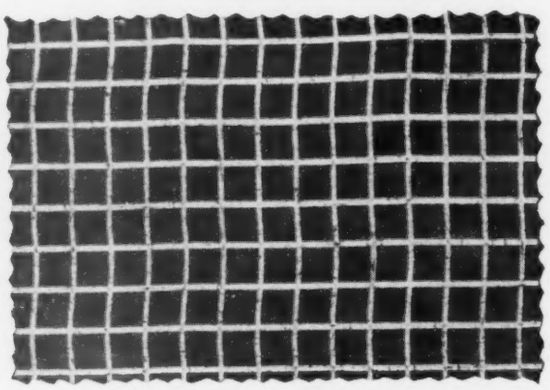
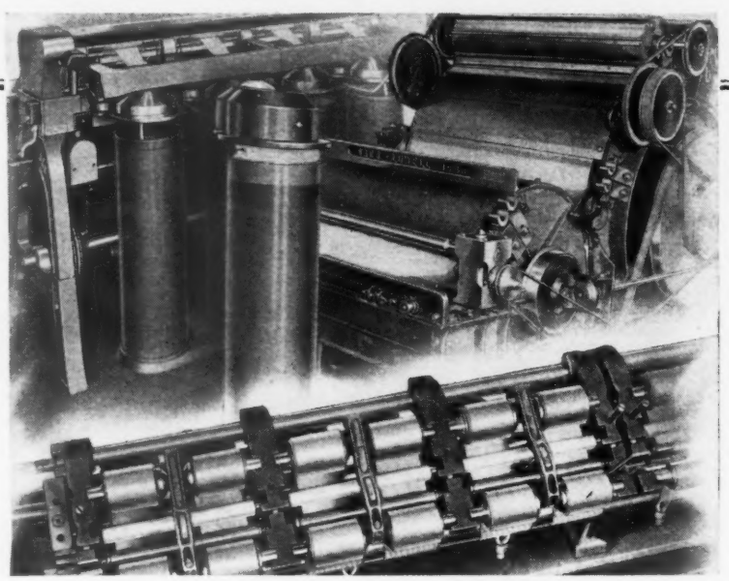


DECORATIVE FABRIC 52 x 40 20/1 Warp and Filling



You can manufacture the yarns for all these fabrics . . . and many more on

SACO-LOWELL flexible equipment* FOR SYNTHETICS

You can start the manufacture of any type of synthetic yarn on the basis of *experience* gained for you by the *experiments* carried out in the development of this SACO-LOWELL *flexible equipment** FOR SYNTHETICS. With this equipment you can blend, prepare and spin, simple or complex combinations of synthetic fibres efficiently and economically.

You can avoid costly delays and needless experiments by consulting Saco-Lowell on the development of the organization and the selection of equipment necessary to blend, prepare and spin these and many more synthetic fibres.

[*A few simple changes will convert this equipment to cotton processing]

SACO-LOWELL SHOPS - *BOSTON* - *Charlotte* - *Greenville* - *Atlanta*

No-We Didn't Put Sun Helmets and Swim Suits on our Motors-but....

"Double Trouble", moaned the experts, but the Navy stood fast. "All we want", said they, "are starting motors for diesel engines that'll stand up in tropic heat. Make them waterproof too!"

Blood pressures went up, when we ran into short-circuits. Horsepower had to be high (14-22 hp) and frames extra small (1/5 standard size). To offset this, operating periods would never last more than 45 seconds.

Well, we sweated out the high temperature problem — finally licked it with a new method of induction brazing of armature coils. Result: our coil could withstand high temperatures under all operating conditions.

Swimming suits required! Next, we had to waterproof our motors to make them swimmers. So we slipped a spun cover over each unit and sealed it against a neoprene rubber gasket. They shed water like a duck!

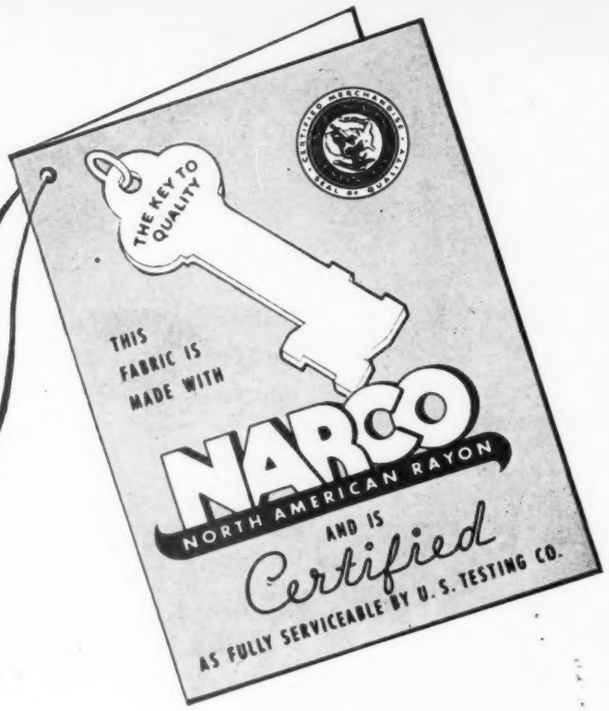
"On the beam" was the way those diesel engineers put it when they saw the finished product. And you should have seen the way they beamed after they made their tests. We lost a few buttons off our vests too!

There's a Moral: Every time Allis-Chalmers engineering solves *special* motor problems, we discover new ways to build better standard motors for you. ALLIS-CHALMERS, MILWAUKEE 1, WIS.

A 1928

Wait 'til you see the NEW ALLIS-CHALMERS MOTORS!

HEAR THE BOSTON SYMPHONY: *Every Saturday Evening, American Broadcasting Co.*



Your QUALITY *Credentials*

When you show the consumer the NARCO Certified Tag on any garment, this is what it means to her:

1 The fabric has been tested by the U. S. Testing Company for

SHRINKAGE	*TENSILE STRENGTH*	*CONSTRUCTION*
COLOR FASTNESS	*SEAM STRENGTH*	*YARN UNIFORMITY*

2 The fabric has been approved and certified.

3 The fabric has been awarded the nationally recognized Seal of Quality.

That's why it pays you to feature the NARCO Certified Tag on all garments made of certified NARCO rayon fabrics.

NARCO
NORTH AMERICAN RAYON
Reg. U. S. Pat. Off.

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Perfect teamwork

KEEPS 'EM SPINNING

GOODYEAR'S E-C Cord Multi-V Belts make a driving team that can't be beat. They add up to perfect uniformity on every count—

Uniform cross section with each belt built to fit the sheave groove in the correct position.

Uniform strength as the result of balanced load-carrying section with the same number of high-tensile cords throughout the length of *each* belt.

Uniform low-stretch because the cord is preshrunk, rubber-impregnated and gum-insulated for a stronger carcass bond.

Uniform length — insured by matched sets of belts of equal length.

Uniform pull—because all belts grip the sheaves evenly without binding or grabbing, insuring steady, equalized pull.

Uniform service—because each belt does its full share of the job without slacking—setting new high standards of service life and efficient performance.

Let the G.T.M.—Goodyear Technical Man—give you down-to-earth facts and reasons why E-C Cord Multi-V Belts can increase your operating efficiency without adding to your operating costs. He'll hurry to your mill if you write Goodyear, Akron 16, Ohio or Los Angeles 54, California.

E-C Cord—T. M. The Goodyear Tire & Rubber Company

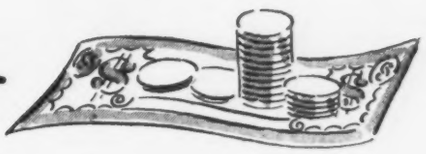
"Certainly I Know Bemberg!"

Name the rayon brand names the consumer knows and trusts. Check your list by asking the first ten women you meet to name the rayon brands they know. • In practically every instance the name, Bemberg*, will be one of the first mentioned. • And that's your cue to the importance of featuring the Bemberg Certified Tag on all garments made of quality-tested Bemberg rayon fabrics. It's a direct path to the consumer recognition every brand-minded manufacturer and retailer tries to achieve.

AMERICAN *Bemberg* CORPORATION

261 Fifth Avenue, New York 16, N. Y.

*"BEMBERG" *is the registered trade-mark of* AMERICAN BEMBERG CORPORATION

Trade this for this ; save and 

No more *forcing* of sheaves. Simple wrench operates Allis-Chalmers' "Magic-Grip" — *fastest mounting and demounting sheave on the market.* Saves time, money.

SEE HOW QUICKLY, EASILY THIS NEW SHEAVE MOUNTS AND DEMOUNTS

1 Place sheave on shaft. Slides on smoothly because clearance is provided by expanded bushing. There's *no* hammering — *no* forcing! Complete sheave and bushing unit comes intact—ready for quick, easy mounting.

2 Align exactly, using straightedge, (It's easy with this free-sliding sheave.) Then tighten three cap-screws; sheave is locked to shaft, *grips like magic!* No set screws to damage the shaft. Write A-C for Bulletin B6310.

RECONVERTING?

GET THIS NEW FREE KIT!

To help you find out how your present equipment will fit into future production, A-C offers a new free "Reconversion Inventory Kit" — Fact Sheets and Check Lists to speed your appraisal of V-belt drives, electric motors, and centrifugal pumps. Applies to all makes. Call your A-C distributor or district office, or write Dept. 00, ALLIS-CHALMERS MFG., Milwaukee 1, Wisconsin.

A 1855

Allis-Chalmers Texrope "MAGIC-GRIP" SHEAVES

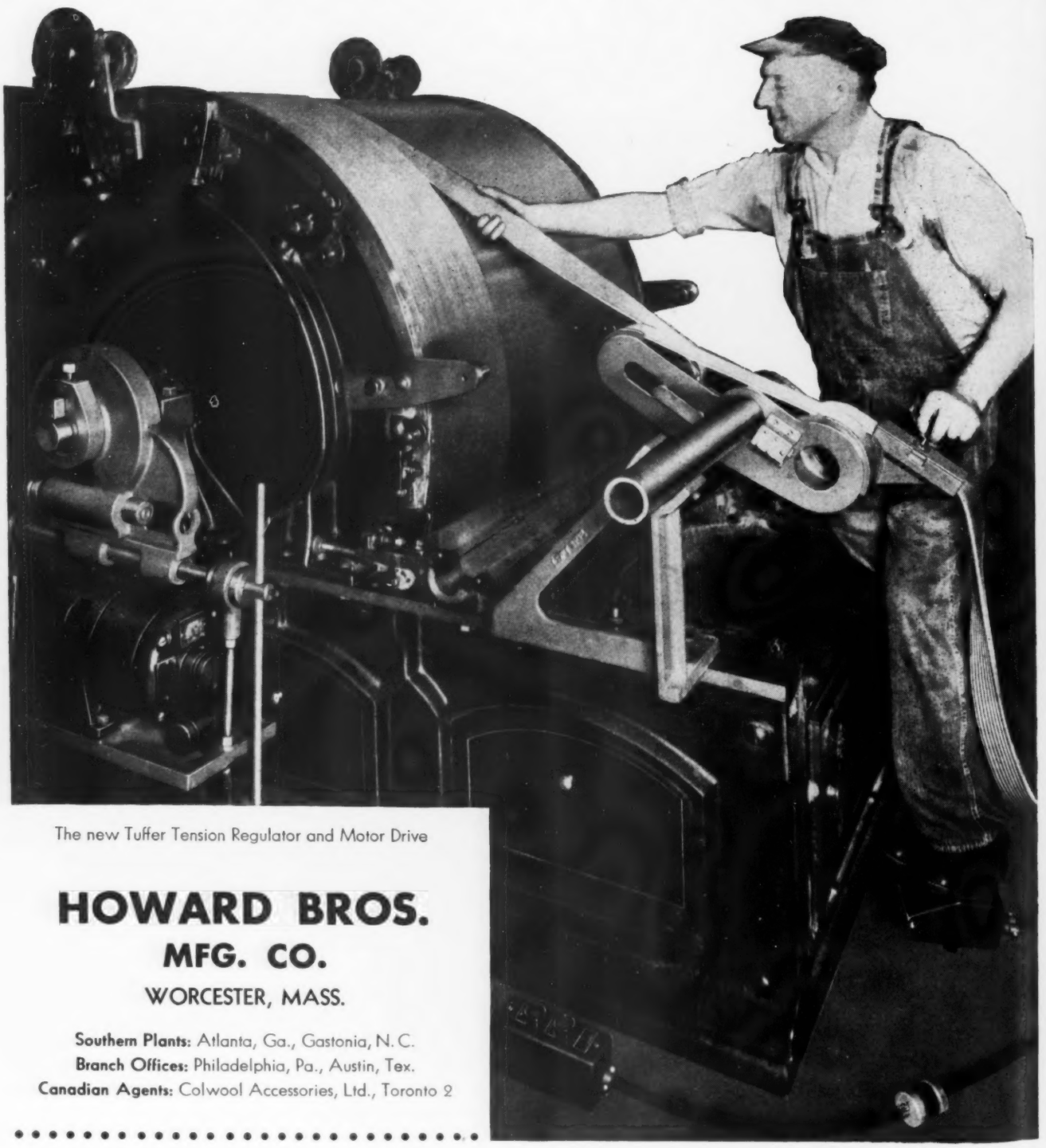
What Investment Promises More?

The uniformity and strength of yarns — to a large extent — determine operating efficiencies in the spinning and weaving rooms.

Proper carding is the *first step* toward strong, even yarns. Expertly applied and operated, Tufferized Card Clothing should materially improve the quality of your carding and increase the yield. It is guaranteed uniform because it is made by our exclusive patented precision process.

Where else would this relatively small investment have such a widespread, beneficial effect?

Use TUFFERIZED Card Clothing



The new Tuffer Tension Regulator and Motor Drive

HOWARD BROS.
MFG. CO.
WORCESTER, MASS.

Southern Plants: Atlanta, Ga., Gastonia, N. C.
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Gear Puzzle with a Payoff for your Plant!

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GARGOYLE Lubricants

NO, this isn't an engineer's nightmare! It's our conception of the different types of gears in your plant, linked in a continuous train. Production costs . . . and profits . . . depend on efficient operation of gears like these. Each gear has its own lubrication needs.

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The same applies to all bearings and cylinders. Socony-Vacuum's great new wartime developments, backed by 80 years' lubrication experience, are available in a Complete Lubrication Program for your plant. Insure maximum machine efficiency now with this program.

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Tune In "Information Please"—Monday Evenings, 9:30 E.S.T.—NBC

your glazed fabric can go places now

Entirely new opportunities for glazed fabrics, never before possible with the old "one-time" glazes, are now yours to profit by, through Resloom NC-50, Monsanto's new melamine finish.

Glazed fabrics can now go into uses where *frequent washings* are the rule: dresses, uniforms, play clothes, bathing suits, house coats, soft toy coverings, bedspreads, slip-covers, etc. . . . as well as upholstery and drape goods.

Resloom NC-50 finishes *remain crisp and new* after repeated washings.

They are *dry-cleanable.*

They are *spotproof* to alcohol and other solvents.

They are excellently *stabilized* (less than 2% shrinkage under Commercial Standards C. S. 54-41).

They are *non-tacky.*

And they are more *soil resistant, longer wearing* and more *easily tailored* than old-fashioned glazes.

Resloom: Reg. U. S. Pat. Off.

HELP AND INFORMATION AVAILABLE

Resloom NC-50 for glazing is already approved and in use by some leading glazers. It can be adapted to many different formulas to meet varying requirements. It is applied with standard equipment.

For full technical data on Resloom NC-50 and counsel on adapting it to your products . . . write, wire or phone: MONSANTO CHEMICAL COMPANY, Everett Station, Boston 49, Massachusetts.

The Textile
Serving Industry...Which Serves Mankind

MONSANTO
CHEMICALS ... PLASTICS

HOODOO SMASHERS!

America's newest and widest line of V-Belts—Allis-Chalmers' Texrope — solves problems that have hoodooed drives in almost every industry . . . see what they can do for you!

I ROUT THAT OLD BUGABOO, STATIC ELECTRICITY. I'M STATIC-RESISTING SUPER-Z. MY BUILT-IN CONDUCTING ELEMENT CARRIES CHARGES TO THE MACHINE WHERE THEY'RE GROUNDED.

Texrope V-belts are available nation-wide through Allis-Chalmers Dealers and Sales Offices

IT PAYS TO MAKE

ALLIS-CHALMERS

YOUR V-BELT DRIVE HEADQUARTERS

Texrope Super-7 V-Belts result from the cooperative research of two great companies — Allis-Chalmers and B. F. Goodrich — and are sold exclusively by A-C.

BULLETIN!

SPEED RECONVERSION WITH HELP OF NEW FREE A-C KIT!

Guide to "How to Take Reconversion Inventory" of Drives, Motors, Pumps

Help in the big job of reconverting for peacetime production is now offered to plants everywhere by Allis-Chalmers Mfg. Co., its district offices and distributors. To all who request it, we're sending the new "Reconversion Inventory Kit", planned to speed the task of determining the condition of your existing equipment — V-belt drives, motors, and centrifugal pumps — which will be used in reconverted production.

SUGGESTS PROCEDURE, STATES STANDARDS

Used by foremen, maintenance men, and engineers, the Kit is a real time-saver . . . leads efficiently to probable trouble spots, helps clear them up. Gives bearing tolerances, resistance formulae, etc., in compact, easily-used form. Check List appraisal charts help determine present and future condition of units inventoried.

HOW TO GET YOUR KIT

For your free Reconversion Inventory Kit, call your nearest Allis-Chalmers distributor or district office, or write Dept. 20, ALLIS-CHALMERS MFG. CO., Milwaukee 1, Wis.

A-1910

ALLIS-CHALMERS MFG. CO.
Dept. 20, Milwaukee 1, Wis.

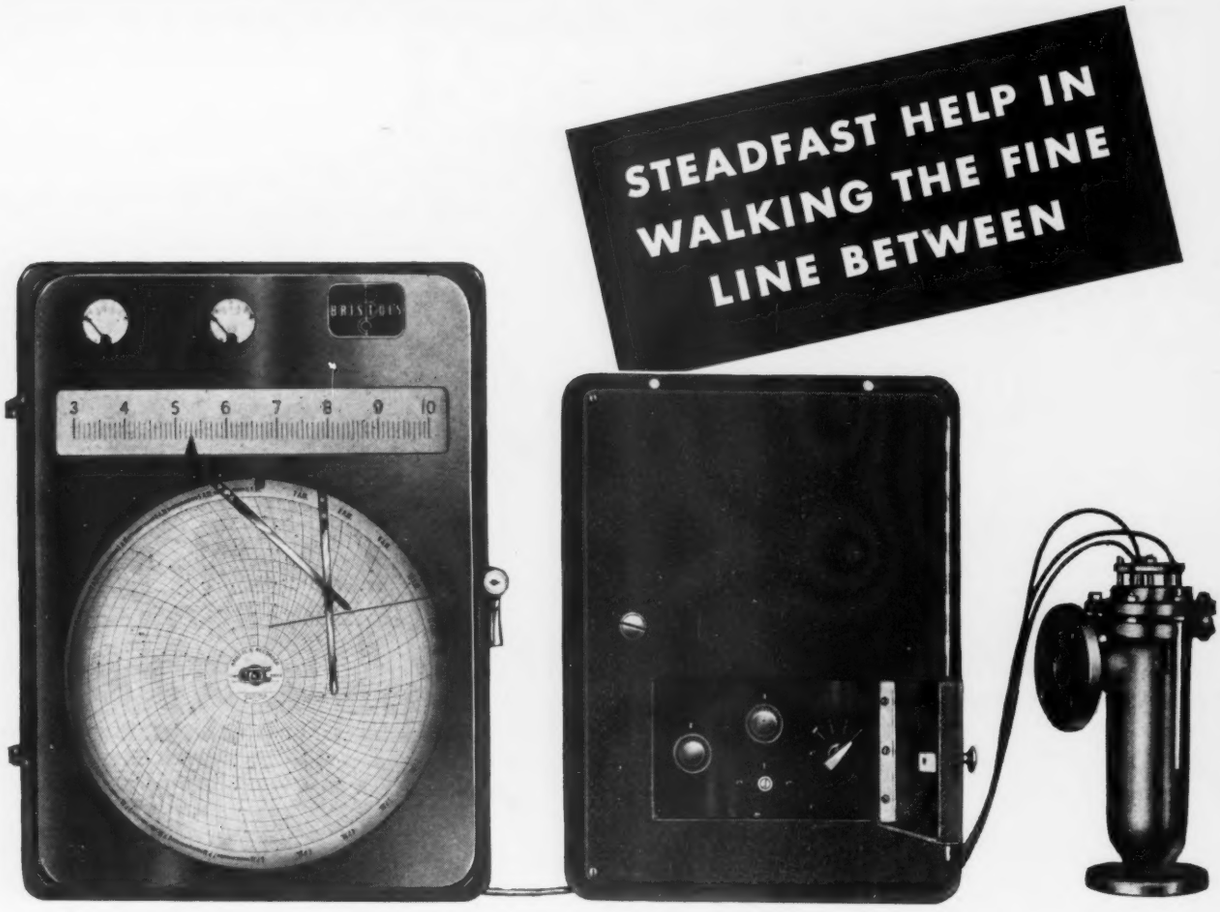
Please send Reconversion Inventory Kit free of charge to:

Company.....

Address.....

.....

Attn. of Mr.....



...TOO ACID...TOO ALKALINE

HOW TO BE SURE ABOUT...pH...

Turn the problem over to a Bristol Continuous pH Controller and let it, automatically, handle such responsibilities as

- neutralizing after carbonizing
- condition of water for dye and bleach house
- neutralizing dye house waste
- testing condensate from heating coils and automatically dumping it if acid.

Periodic sampling for test will no longer be necessary. The instrument, informed of conditions, automatically adjusts for the correct pH value.

The Bristol Recording pH Controller, which operates Synchro-Valves, is designed around Bristol's exclusive Free-Vane principle, the most accurate of all air-operated designs. The Free-Vane is completely frictionless — it floats between two opposing jets of air — so there is no retarding action on the measuring element. An absolute true record of actual results is obtained.

Write for Bulletin 536 on pH Control, addressing THE BRISTOL COMPANY, 157 Bristol Rd., Waterbury 91, Conn. The Bristol Co. of Canada, Ltd., Toronto, Ontario. Bristol's Instrument Co., Ltd., London, N. W. 10, England.

BRISTOL

Engineers process control for better products and profits

AUTOMATIC CONTROLLING AND RECORDING INSTRUMENTS

SANDOZ PRESENTS *the color achievement of the month*

Outdoor Colors BY UNITED PIECE DYE WORKS

There's promise of spring in these pastel prints by United Piece Dye Works of Lodi, New Jersey . . . overall patterns ranging from muted Paisley designs to spirit-lifting florals on clear and sunny pastel rayon silks.

For authentic color interpretations textile leaders like United include Sandoz among their suppliers . . . often calling upon Sandoz for assistance in developing progressive ideas in coloring and in capturing desired effects.

In thinking ahead in textiles, Sandoz chemists and technicians keep in constant touch with both the fashion and manufacturing worlds, while continuing to extend the possibilities of efficient and distinctive coloring. Out of Sandoz Laboratories have come Pyrazol Fast Orange GLL and Pyrazol Fast Green GLL — of excellent light fastness . . . for superior wet fastness, *particularly* on rayon there are the Sandoz Diazamine (developed) colors.

For acid, chrome or direct dyes . . . or auxiliary chemicals . . . for both natural and synthetic fibres . . . be guided by the successful "color achievements" you have been seeing in these Sandoz advertisements.

Sandoz application laboratories are located in New York, Boston, Philadelphia, Los Angeles, Charlotte, Toronto, where stocks in wide range are carried. Other branches are in Chicago, Paterson and Providence.

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

SAND *thinks ahead with textiles* S SANDOZ

IT MAKES WINDING EASY...AND SAVES PRESS-OFFS IN KNITTING

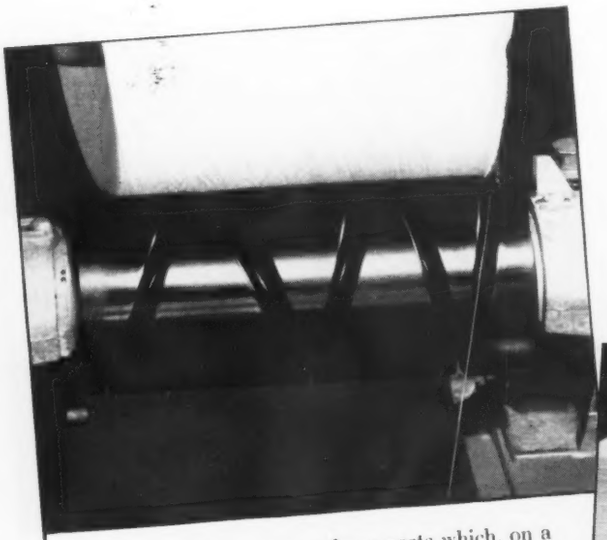
The Rotary Traverse, Universal's exclusive method of driving the winding package and traversing the yarn, is responsible for (A) the virtual elimination of winding machine maintenance and (B) a reduction of difficulties in producing knitted fabrics.

Mills operating Roto-Coners* obtain the dual advantage of lower-cost production and greater customer satisfaction.

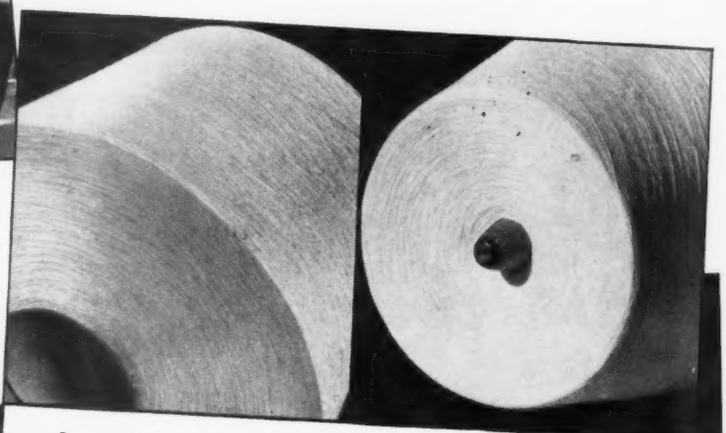
For knitting yarns, the Rotary Traverse has a "full-accelerated" groove arrangement; for tubes and dyeing packages, the groove crossings are evenly spaced. In either case, the groove arrangement is standard for all yarn sizes, giving the desirable *minimum* number of winds. Write for Bulletin 144, addressing Universal Winding Company, Providence, Boston, Utica, Philadelphia, Charlotte, or Atlanta.

*Reg. U. S. Pat. Off.

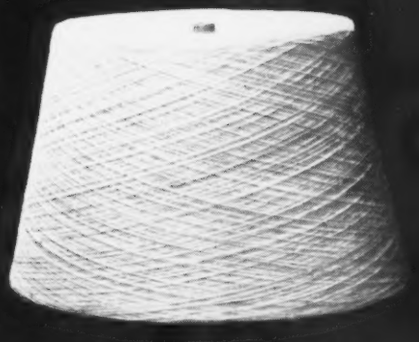
23-5-17



The Rotary Traverse replaces parts which, on a reciprocating-guide machine, wear fast and need frequent greasing, adjustment and replacement. The Rotary Traverse is standard for all conditions the machine will encounter . . . despite its high speed, it never needs greasing . . . and its life is virtually equal to the life of the machine. On the Roto-Coner*, maintenance runs about ½ of 1% on investment cost per year.



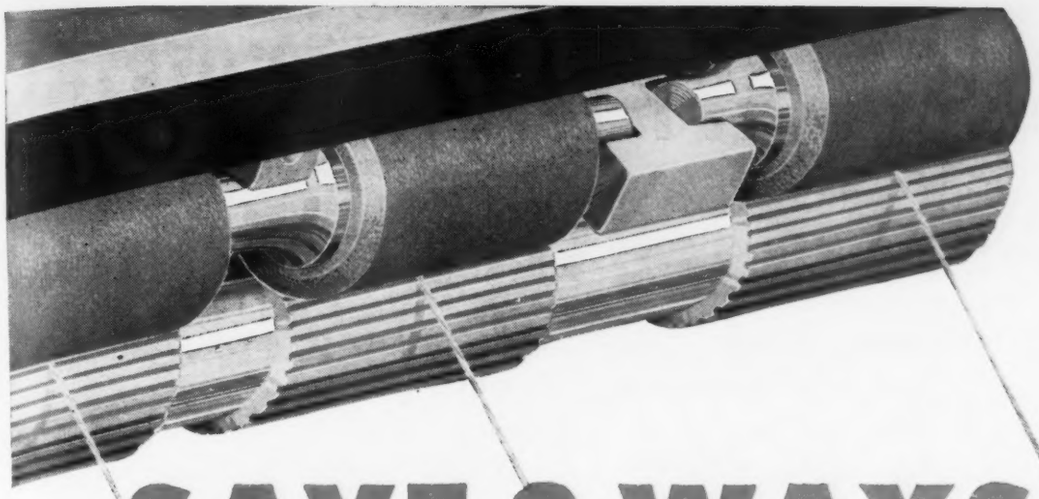
Inspection of Roto-Cones will show an absence of roll cuts near the nose end and freedom from underwinds or stitches at the base end. Since no slip drum is used, there is no chance of nipping the yarn between slip and driving drum. Since the yarn is reversed quickly at the ends of the traverse, there is no dwell, no chance for the yarn to build up and roll inward. Roto-Cones deliver freely without plucks or sloughing off.



ROTO-CONER* LEESONA REG. U.S. PAT OFF.

Open-Wind Cones for Knitting

WARPING CONES · DYEING PACKAGES · PARALLEL TUBES FOR TWISTING



SAVE 3 WAYS

LOW FIRST COST . . .

LONG INITIAL USE . . .

EXTRA SERVICE LIVES . . .

. . . with Armstrong's Cork Cots

Three-way economy is one of the big reasons why Armstrong's Cork Cots are serving more spindles today than any other roll covering. Low in first cost, these durable cots give you a long initial service life. And they can be rebuffed like new three or four times . . . for as little as one-half cent per roll per rebuffing . . . giving you a total of four or five full-length service lives.

In addition to this triple saving, Armstrong's Cork Cots produce stronger, more uniform yarn. They draft better. Their high coefficient of friction eliminates eyebrowing, reduces slippage. And because these cots are extra resilient, they "come back" quickly after grooving by top roll laps or hard ends. They are uniform . . . grip yarn evenly. And they maintain a true drafting surface because they do not "flow" under pressure.

Experience these advantages in your own mill. See for yourself how Armstrong's Cork Cots can help you get better running work and more poundage—*at lower cost*. For samples, prices, and complete information, get in touch with your Armstrong representative. Or write today to Armstrong Cork Company, Textile Products Department, 8302 Arch St., Lancaster, Pennsylvania.

BETTER RUNNING WORK

— MORE POUNDAGE

ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS

MEADOWS HEAVY-DUTY PRECISION BALL-BEARING CYLINDER UNITS

-For cotton, woolen and worsted spinning and twisting

Applied with high-strength ground and polished journals (made to your requirements), they reduce cylinder maintenance and save power.

Journals made of high-strength steel ground and polished to tolerance of +.000-.001 Cylinder units equipped with Fafnir wide inner ring, self-aligning precision ball-bearings, and eccentric locking collar.

We maintain a stock of housings and bearings to fit most Whitin, Saco-Lowell, Saco-Pettee, H & B, Lowell & Mason frames. Ball-bearing units are already in production for some woolen and worsted spinning and twisting frames.

We will design and tool-up from your old housings for any housings not in stock, *without pattern cost to you*, on samples which may develop into quantity orders. We can also supply ball-bearings, housings and joints for slashers. Write us, or contact our representatives.

Representatives

JAMES P. COLEMAN,
P.O. Box 1351, Greenville, S. C.

MATTHEWS EQUIPMENT CO.,
93-A Broadway, Providence, R. I.

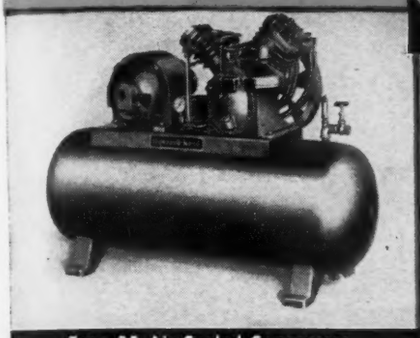
MEADOWS MANUFACTURING CO. · ATLANTA, GA.

. . . . Ball-bearing Specialists to the Textile Industry . . . .

GIVE YOUR TROUBLES THE AIR!

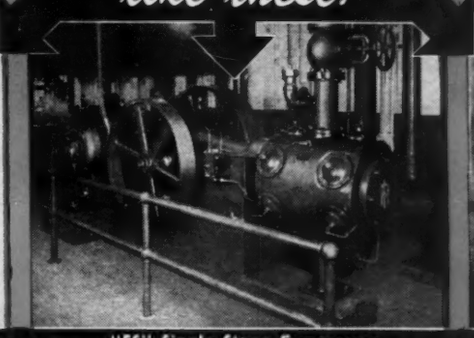
All you have to do is compress air in the type of machine which best suits your needs . . .

like these:



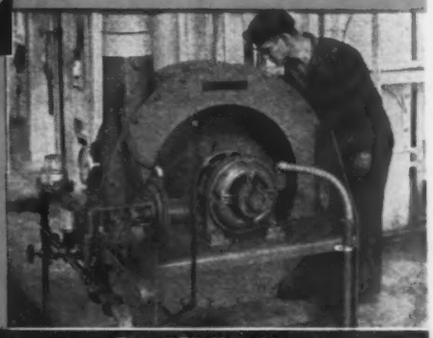
Type 30 Air-Cooled Compressor
½ hp to 10 hp

. . or . .



"ES" Single Stage Compressor
For continuous duty, 10 to 125 hp

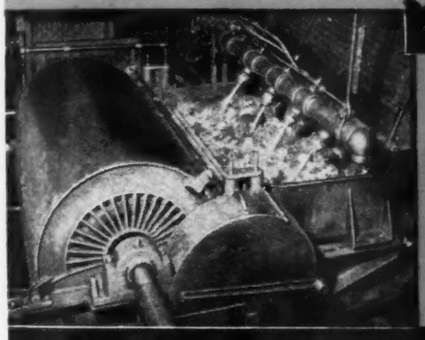
. . or . .



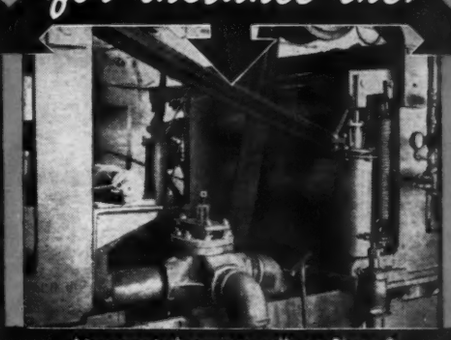
Type "G" Motorblower
For low pressures, 2 to 30 hp

Then pipe it to the spots where your troubles occur, . . .

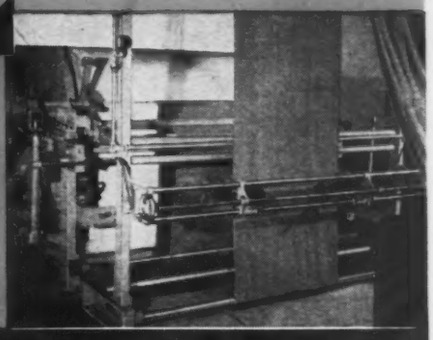
for instance the:



Oil atomizers on woolen mixing picker



Air-operated squeeze rolls on Riggs & Lombard continuous washer



Air-operated guiders on semi-decator

***Result:* Increased production, uniform quality, less handling, less seconds.**

Compressed air has proved itself to be such an efficient, flexible, and economical source of power that its uses have increased from the original humidification and cleaning applications of 50 years ago to a long list of services of which the following are but a few:

DECKERS . . . TEMPERATURE CONTROL . . . GUIDERS . . . SQUEEZE ROLLS . . . ATOMIZERS . . . DRYERS . . . CALENDERS . . . CONVEYORS . . . HOISTS . . . PRESSES . . . CARD STRIPPERS . . . VACUUM CLEANERS . . . AIR TOOLS . . DRY CLEANERS . . . YARN CONDITIONERS.

Ingersoll-Rand Company pioneered in the manufacture of air compressors and today makes just the compressor you need. (Over 1000 sizes and types.) Consult an I-R Engineer. He knows your problems and is always ready to discuss them with you.

Ingersoll-Rand

11 BROADWAY, NEW YORK 4, N. Y.

I-792

COMPRESSORS · CONDENSERS · TURBO BLOWERS · CENTRIFUGAL PUMPS · ROCK DRILLS · AIR TOOLS · OIL AND GAS ENGINES

MEADOWS HEAVY-DUTY PRECISION BALL-BEARING CYLINDER UNITS

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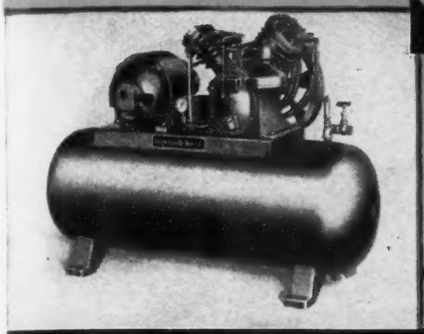

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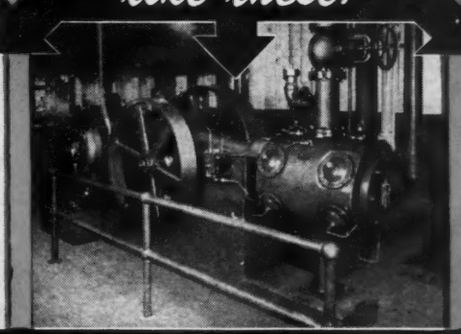

"ES" Single Stage Compressor
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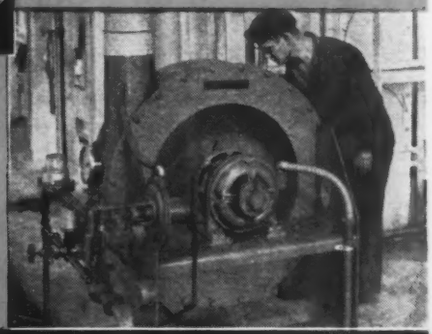

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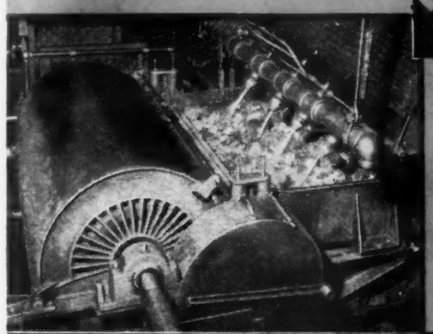

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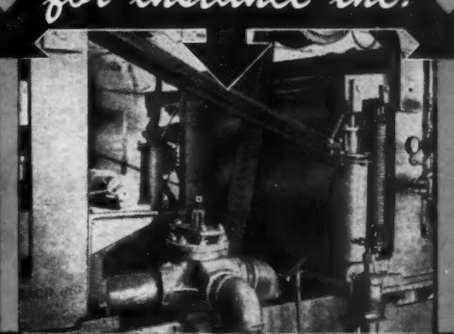

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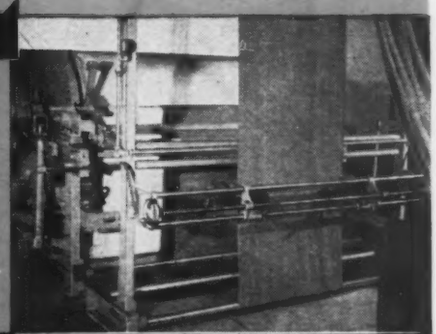

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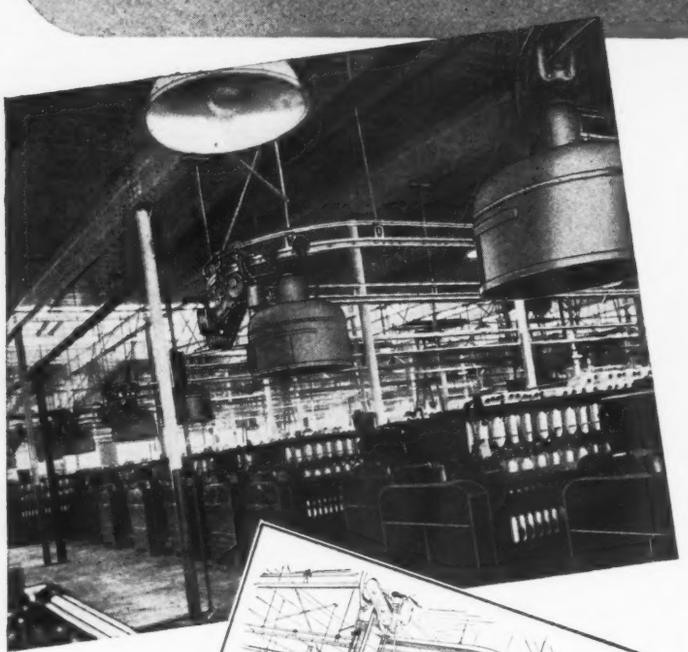
COMPRESSORS · CONDENSERS · TURBO BLOWERS · CENTRIFUGAL PUMPS · ROCK DRILLS · AIR TOOLS · OIL AND GAS ENGINES

WANT THESE RESULTS . . .

- BETTER RUNNING WORK . . .
- FEWER GOUTS AND BUNCHES . . .
- LESS ENDS-DOWN . . .
- SPINNERS HANDLING MORE SIDES . . .
- LOWER CLEANING COSTS . . .
- NO LOST PRODUCTION . . .
- REDUCED MACHINE STOPPAGE . . .

AT LOWER OPERATING COSTS

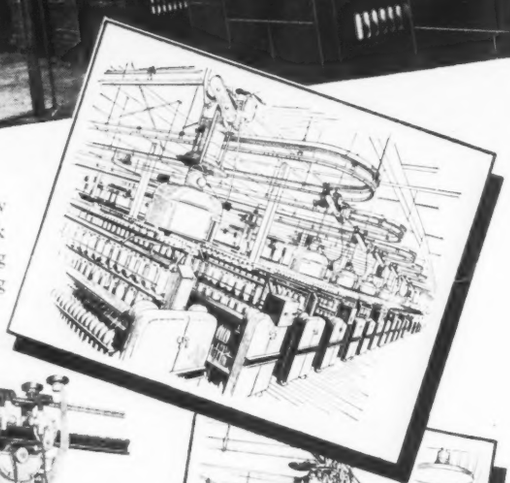


You can have them with

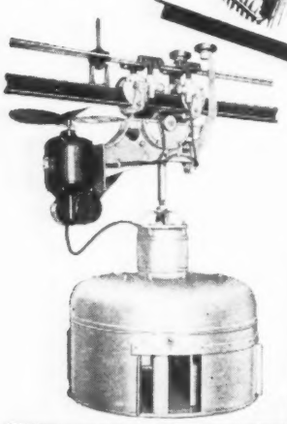
AMERICAN MONORAIL

Automatic

OVERHEAD CLEANERS



Write for new 24-page book explaining cost saving advantages.



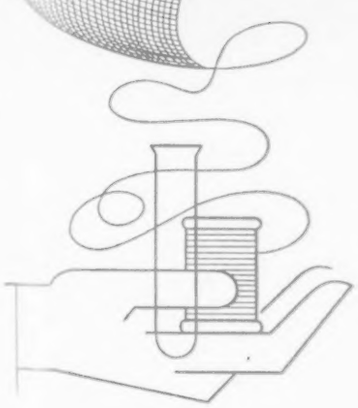
Let an American MonoRail Engineer explain these advantages and tell you the complete story of Controlled Cyclonic Cleaning for spinning, winding, twisting and warping operations. This information will be gladly given without cost or obligation on your part.

THE AMERICAN MONORAIL CO.
13108 ATHENS AVE. CLEVELAND 7, OHIO

Firestone

*Velon** VERSATILE NEW TEXTILE FIBRE

Creates sales for colorful, beautiful fabrics never before practical



***Velon* is opening up new markets** for lighter, brighter, smarter fabrics. *Velon* is creating new sales—quantity sales—where woven fabric could never be used before. For *Velon* makes delicate, luxurious color superbly practical – resists dirt, abrasion, punishing wear to an amazing new degree.

Firestone can now release this man-made wonder fibre to the textile industry. Four years of weaving have developed *Velon's* many applications. And years of widespread wartime use have proved its wearing qualities.

Grease and grime can't cling to non-porous *Velon* filament. All traces of soil—even acids and alkalis – can be quick-wiped away with a damp cloth. The color is inherent in the fibre, so *Velon* can't wash out, fade from the sun or change color. *Velon* will not absorb moisture or support flame. The filament is homogeneous, so it cannot snag or scuff. Practically wear-proof, yet so resilient, the woven fabric keeps its shape and dimensions.

***Velon* fabric is economical** to manufacture and profitable to sell. It is especially suitable as upholstery fabric for indoor and outdoor home seating as well as transportation and commercial seating; for drapes, wall-lining and trim, curtains, shoes, hats, bags, belts, luggage, lampshades.

Firestone engineers and technicians are available for consultation. Investigate the sales-appealing versatility of *Velon*. Write Firestone, Akron, for full information, today.

BEST TODAY··· STILL BETTER TOMORROW

*TRADE MARK

Listen to the Voice of Firestone Monday Evenings Over NBC

How long is a 9½ long?

That depends on the mill where the rayon was knitted.

When humidity varies, it's impossible to maintain uniformity in length. That trouble, like so many others in the textile industry, is corrected by Carrier air conditioning.

Properly conditioned air can do a lot to lick the static electricity that causes weak and fuzzy yarn . . . reduce the amount of "fly" in carding . . . increase worker efficiency.

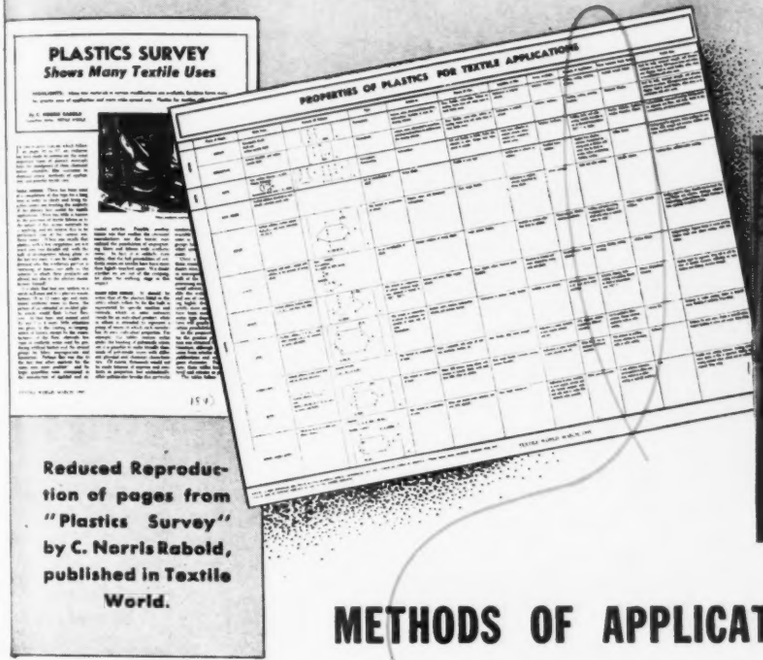
Carrier has been helping leading textile mills increase the quantity and quality of their output for 39 years. Its engineers know every phase of the industry . . . and they know air conditioning. *Year-round air conditioning was born with Carrier* . . . and Carrier has pioneered every major advance.

Carrier's experienced engineers can show you how to give your mill the advantages of *modern* air conditioning. Why not talk it over with them? There's no obligation, of course. Just write Carrier Corporation, Syracuse, N. Y.

Carrier

AIR CONDITIONING
REFRIGERATION
INDUSTRIAL HEATING

Let *Plastics* transform your cloth into a glorious new material!



Reduced Reproduction of pages from "Plastics Survey" by C. Norris Rabold, published in Textile World.

Photo courtesy of Cleaveland Laboratories & Mfg. Co.

METHODS OF APPLICATION ARE PROVIDED WITH

WALDRON MACHINES

Waldron Machines For Your Process Include

- Reverse - Roll Coaters
- Knife Coaters
- Saturators
- Laminators
- Web Guides
- Unrolls
- Winders
- Rewinders

In his valuable survey, part of which is illustrated above, Mr. Rabold lists 27 plastics and 27 methods of applying them to textiles for as many textile uses. It is highly significant that for 25 out of the 27 there is now a time-tested WALDRON machine for the method of application suggested.

Plastic coated or saturated cloth holds tremendous possibilities for new markets for new materials—materials of greater beauty, durability and versatility. The majority of these will stem from the modern WALDRON machines designed to properly handle the required processing operations.

Investigate the possibilities for your product. Whatever your requirements, WALDRON engineers possess the specialized knowledge to properly advise you. Many of the most popular products already developed through a combination of plastics and textiles are the result of special processing on WALDRON machines.

Copy of "Plastics Survey" by C. Norris Rabold and our Catalog No. 112 will be gladly furnished on request.

JOHN WALDRON CORP.

Main Office & Works – NEW BRUNSWICK, NEW JERSEY

CHICAGO - 6
201 N. WELLS ST.

NEW YORK - 17
350 MADISON AVE.

BOSTON - 9
79 MILK ST.

BUILDERS OF QUALITY MACHINES SINCE 1827

9 out of 10 are Automatic

HERE ARE A FEW OF THE MANY USERS!

ALL INDUSTRY

RAILROADS

Baltimore & Ohio R. R.
Chicago, Milwaukee, St. Paul & Pac. R. R. Co.
Illinois Central System
New York Central System

CERAMICS

Hazel-Atlas Glass Co.
Johns-Manville Products Corp.
The Glidden Co.
U. S. Gypsum Company

RUBBER

Goodrich Rubber Co.
The Goodyear Tire & Rubber Company
Kelly Springfield Tire Co.
U. S. Rubber Co.

FOOD

Armour and Company
Campbell Soup Company
The Cudahy Packing Co.
General Foods Corporation
Heinz, H. J. Co.
Kellogg Co.
Kraft Foods Company
Kroger Grocery & Baking Co.
Libby, McNeill & Libby
Lipton, T. J. Inc.
Swift & Company
Wrigley, Wm. Jr., Co.

PRINTING

Brown & Bigelow
The Cuneo Press, Inc.
Meredith Publishing Co.
Rand McNally & Company
U. S. Printing & Lithograph Co.

MACHINERY

Allis-Chalmers Mfg. Co.
General Electric Co.
Western Electric Co.
Westinghouse Elect. & Mfg. Co.

EQUIPMENT

Bendix Radio Div., Bendix Aviation Corp.
Dodge Manufacturing Corp.
General Bronze Corporation
National Cash Register Co.
Radio Corp. of America

TEXTILES

American Viscose Corp.
Cen-Tennial Cotton Gin Co.
Industrial Rayon Corp.

MANY HAVE FOUND TRANSPORTERS

SAVES THE MAN...LIGHTENS HIS LOAD...TAKES THE WORK OUT OF A JOB

CONTROLS IN STEERING HANDLE

All movement of the Transporter is controlled by gentle touch of the hand and thumb. Operator simply rests his palm on the cross handle, applies easy thumb pressure to the button, and away goes a 6000-pound load at creeping or walking speed, forward or reverse. Simple as turning the ignition in a car, effortless as a pleasant walk.

POSITIVE MECHANICAL BRAKE

Again, operator has complete control of stopping as well as starting with absolutely no manual effort. The thumb is released, power automatically shut off, and Transporter comes to a gradual stop. Guide handle to vertical position and heaviest loads come to an instant stop. Everything is completely mechanical . . . nothing left to human error.

"DEAD-MAN" CONTROL

Day-dreaming, inattention or sudden distraction from work cannot endanger the operator or the load with Transporter "Dead-Man" Control. When the hand is taken off the steering handle, it flips back to its normal position, and the Transporter stops dead. It becomes inoperative *immediately.*

SHOCKLESS HYDRAULIC LIFT WITH EASY FOOT CONTROL

Simple foot pressure on almost ground level lever raises load to position for horizontal movement. No standing on lever, no straining of leg muscles. The load goes up gently, safely, evenly. Same easy foot pressure lowers load at any speed, without shock, without jar, without danger to the most fragile load.

● Today thousands and thousands of Automatic Transporters are in use the country over. As you can see from the partial list of users shown above, daily they haul anything and everything for every kind of business...have been doing so for years. Truly a miracle electric truck, it is the only one that is completely industry tested . . . the only one that has withstood the test of time.

It has built-in features that save the man . . . that end back-breaking human toil. It saves so much, that many have amortized its cost in four months or less. Let us show you how it happily combines advantages for both management and labor . . . how much it lightens life's loads. Mail the coupon for complete facts.

***If it isn't* AUTOMATIC, *it isn't a* TRANSPORTER**

TRANSPORTERS...

IS USING THEM!

AUTOMOTIVE

Edw. G. Budd Mfg. Co.
Cadillac Motor Car Div. G.M.C.
Ford Motor Company
GMC Truck & Coach Div., GMC
International Harvester Co.
Mack Trucks, Inc.
Packard Motor Car Company
Stewart-Warner Corporation
The White Motor Company

CHEMICALS

Abbott Laboratories
The Dow Chemical Company
Du Pont de Nemours, E. I. Company
Monsanto Chemical Company
Parke, Davis & Company
Sherwin-Williams Co.
United Drug Company

METAL PRODUCTS

Aluminum Company of America
The American Brass Company
American Can Co.
Continental Can Company, Inc.
Crane Co.
National Lead Co.
Remington Arms Company, Inc.
Simmons Co.
SKF
Timken Roller Bearing Co.
Worthington Pump & Machinery Corp.

STEEL

Acme Steel Company
American Steel Foundries
Bethlehem Steel Co.
Carnegie Illinois Steel Corp.
Jones & Laughlin Steel Co.

PAPER

Container Corporation of America
Crown Zellerbach Corp.
Dennison Manufacturing Company
Eastman Kodak Company
Gaylord Container Corporation
Heco Envelope Company

OTHER INDUSTRIES

American Tobacco Co.
Canada Dry Ginger Ale, Incorporated
Carrier Corporation
The Detroit Edison Company
Endicott Johnson Corporation
The Globe-Wernicke Co.
Long Bell Lumber Co.
P. Lorillard Co.
Pullman Standard Car Mfg. Co.
Spiegel, Inc.
Underwood-Elliott-Fisher Co.

CUT HANDLING COSTS IN HALF!

FRONT WHEEL POWER DRIVE

This feature permits the Transporter "to turn on a dime." It gives complete freedom in maneuvering sharp corners and making turns in narrow aisles. It will turn a full 210 degrees with constant power. All Transporters have this Front Wheel Power Drive. Back Wheel Power Drive Trucks can't begin to provide such time and energy-saving "turnability."

LOWEST OPERATING COST

The Transporter is the only material handling electric truck that provides maximum power for a full day's hauling and yet uses *only* an ordinary light socket for 8 hour recharging. Current cost is 10c to 11c a day based on an electric current cost of 2c a kilowatt hour. Again, no other electric truck can approach such economy in battery, charger and current cost.

"Transporter"
A PRODUCT OF AUTOMATIC
Lightens LIFE'S LOADS

AUTOMATIC TRANSPORTATION CO.
Div. of the Yale & Towne Mfg. Co.,
97 West 87th Street, Dept. B, Chicago 20, Ill.
Please send me complete information about Transporter, the miracle electric truck, and how it can cut my material handling costs in half.

Company Name.....

By.....Position.....

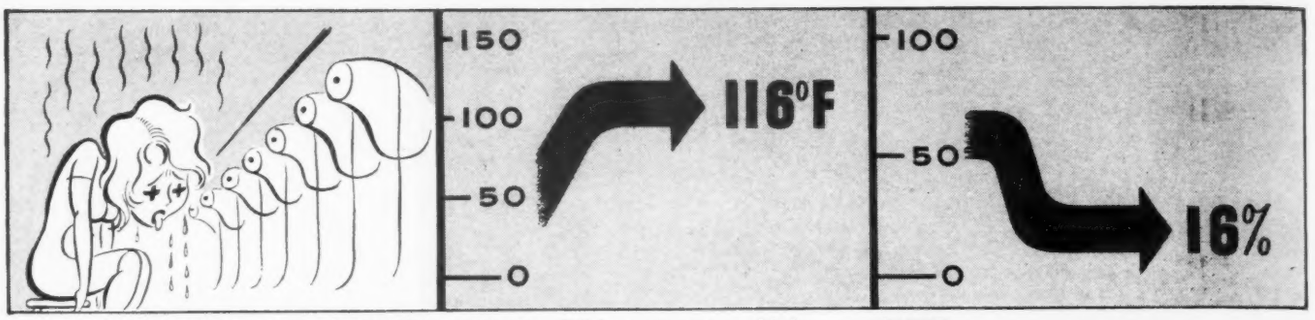
Street Address.....

City.....State.....

3 STEPS TOWARD ALL-TIME-HIGH OUTPUT

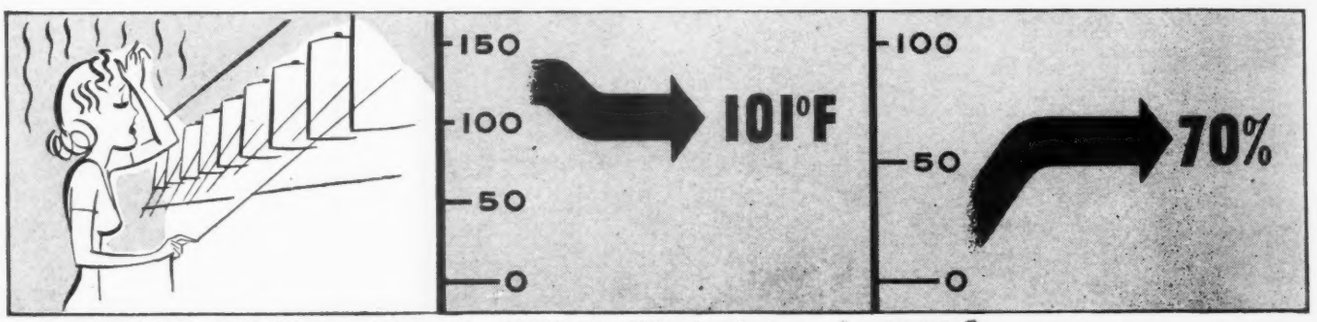
(TYPICAL MILL EXPERIENCE)

TEMPERATURES HUMIDITY



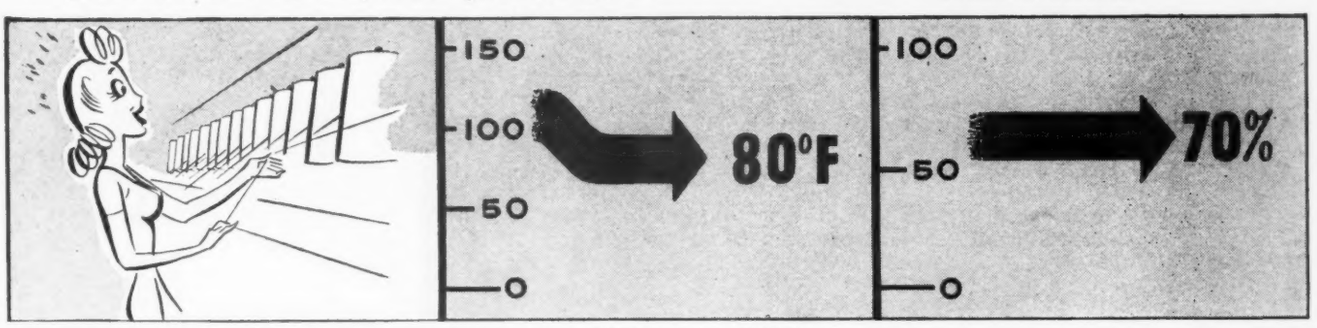
1. NO HUMIDIFICATION — NO TEMPERATURE CONTROL With temperature *high* and humidity *low* the work quality and worker efficiency were poor.

RESULT: Poor Quality. Low Production.



2. WITH ADEQUATE, CONTROLLED HUMIDITY An AMCO Humidification System raised humidity from 16% to 70% and kept it there. The quality improved, but the worker still tired easily with temperature at 101° F.

RESULT: Improved Quality. Increased Production.



3. WITH HUMIDITY AND TEMPERATURE BOTH CONTROLLED Addition of an AMCO Evaporative Cooling System held humidity to the ideal 70%, also dropped temperature to 80° F.

RESULT: Top Quality. Top Production.

In the Amco Evaporative Cooling System, relative humidity is raised by introducing atomized water spray and frictional heat is absorbed by evaporation of the moisture, made practical by carefully controlled air-flow.

This typical experience, with outside temperature 90° F. and relative humidity 33%, demonstrates clearly that good machines and willing workers are not enough. Reducing excessive temperature and holding humidity at the point best suited to fibre and process and the workers' comfort are important in a dollars and cents way.

An AMCO engineer can tell you how you can modernize your plant, by installing this automatic temperature and humidity control, to get the speeds and output needed to meet competition.

AMCO EVAPORATIVE COOLING SYSTEMS

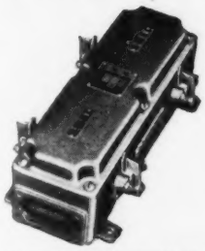
AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

CROUSE-HINDS

Panelboards and Distribution Centers

The illustrations show a representative selection from the dozens of different CROUSE-HINDS Panelboards—each designed for its own purpose.

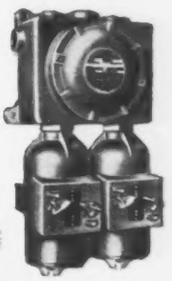
No. 6
of a series of advertisements which demonstrate that CROUSE-HINDS "complete line" means much more than just a range of sizes — there is a wide variety of highly specialized types in each classification.



Type YSW Vaportight and Weatherproof Condulet with Four Circuit Breakers

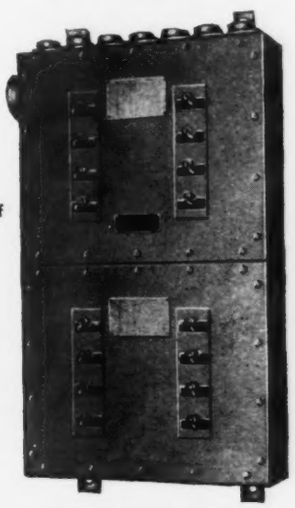
Type DVS Dust-Tight Vaportight and Weatherproof Condulet with Two Circuit Breakers

Type GUSC Explosion-Proof, Dust-Tight and Weatherproof Condulet with Two Circuit Breakers

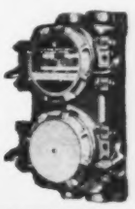


Type ESP Explosion-Proof, Dust-Tight, Vaportight and Weatherproof Panelboard with Four Circuit Breakers

Type DVS Dust-Tight Vaportight and Weatherproof Condulet with Six Circuit Breakers

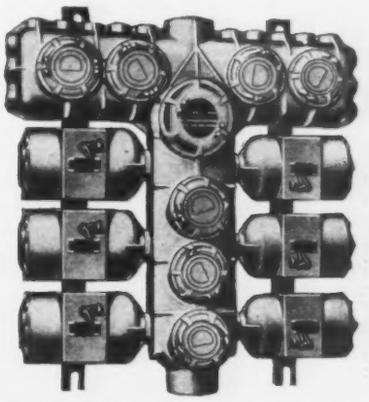


Type DVP Dust-Tight and Vaportight Panelboard with Sixteen Circuit Breakers

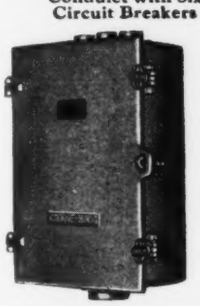


Type GUSC Explosion-Proof, Dust-Tight and Weatherproof Condulet with Four Circuit Breakers

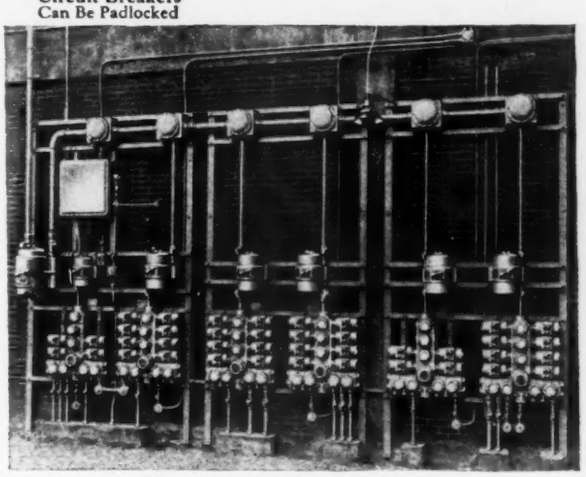
Type DVP Dust-Tight and Vaportight Panelboard with Eight Circuit Breakers



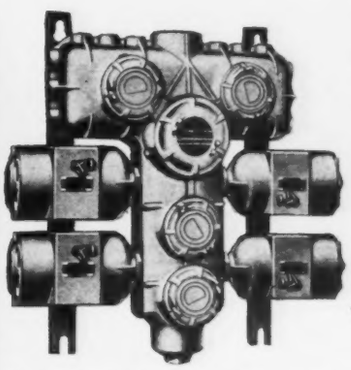
Type EDP Explosion-Proof, Dust-Tight, Vaportight and Weatherproof Panelboard with Six Circuit Breakers



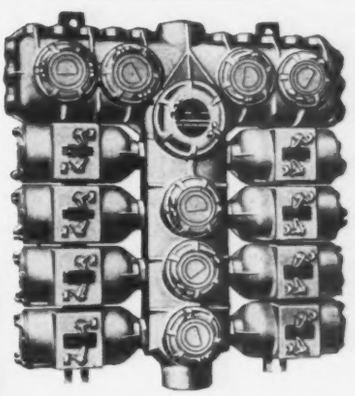
Type WBP Weatherproof Panelboard with Six Circuit Breakers Can Be Padlocked



Explosion-Proof Distribution Center



Type EDP Explosion-Proof, Dust-Tight, Vaportight and Weatherproof Panelboard with Four Circuit Breakers



Type EDP Explosion-Proof, Dust-Tight, Vaportight and Weatherproof Panelboard with Sixteen Circuit Breakers

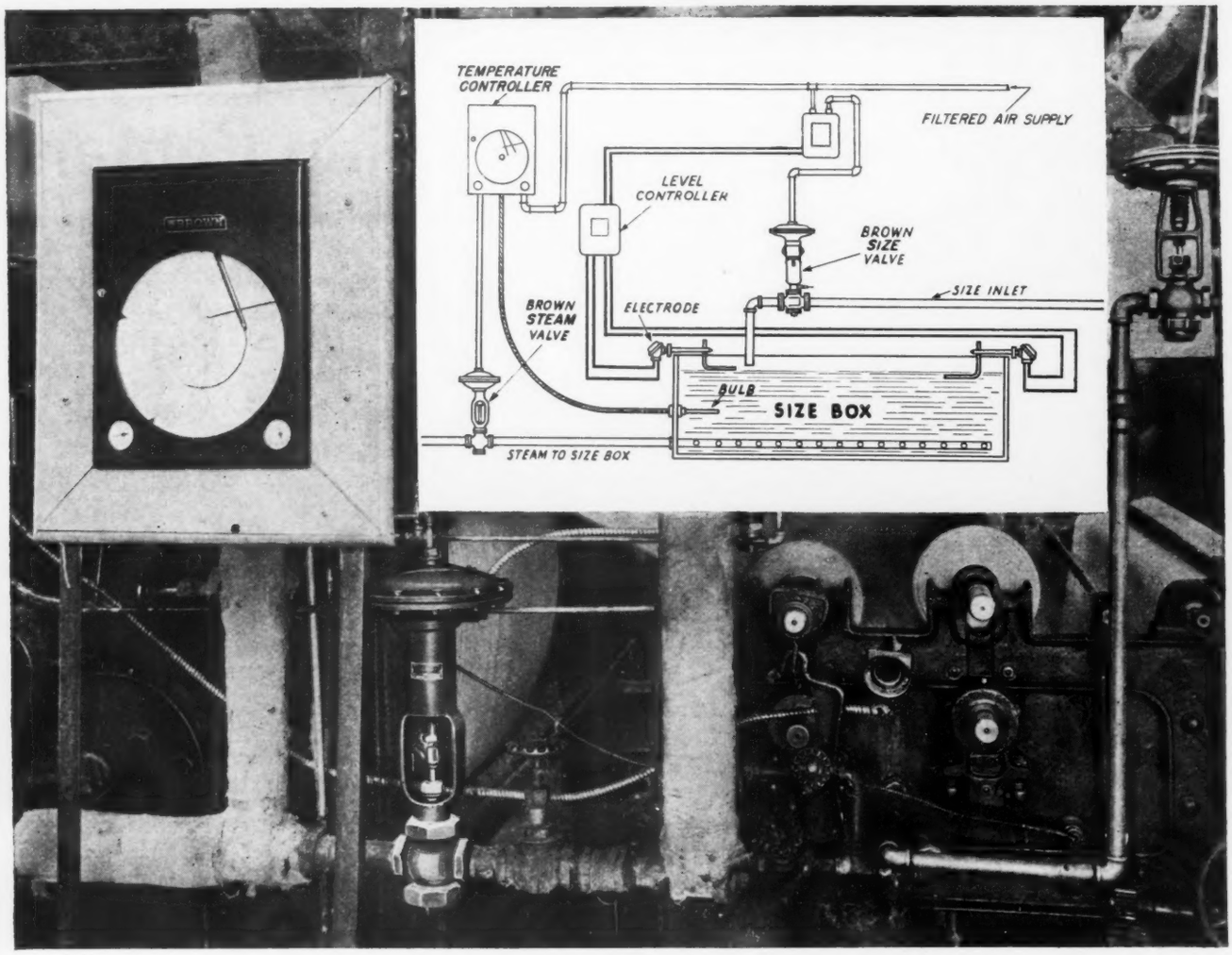
A Nationwide Distribution Through Electrical Wholesalers

Complete listings of each type are in Condulet Catalog No. 2500.

CROUSE-HINDS COMPANY
Syracuse 1, N. Y., U.S.A.

Offices: Birmingham — Boston — Buffalo — Chicago — Cincinnati — Cleveland — Dallas — Denver — Detroit — Houston — Kansas City — Los Angeles — Milwaukee — Minneapolis New York — Philadelphia — Pittsburgh — San Francisco — Seattle — St. Louis — Washington. *Resident Product Engineers:* Albany — Atlanta — Charlotte
CROUSE-HINDS COMPANY OF CANADA, LTD., *Main Office and Plant:* TORONTO, ONT.

CONDULETS · TRAFFIC SIGNALS · AIRPORT LIGHTING · FLOODLIGHTS



THE ANSWER TO SIZE BOX TROUBLES

Improperly sized beams mean trouble in weaving. Accurate control of both temperature and level of the size box is essential to efficient production.

Proven results show that when size temperature and size box level are properly controlled weaving troubles are eliminated.

The Brown Size Box Temperature and Level Control System (illustrated above) maintains uniform viscosity and "pick-up" — yarn immersion is standardized — correct saturation and uniform coating of the fibres are assured.

The Size Box Level Control Electrodes operate on the electrical conductivity of the size itself and are unaffected by "foaming" or "caking".

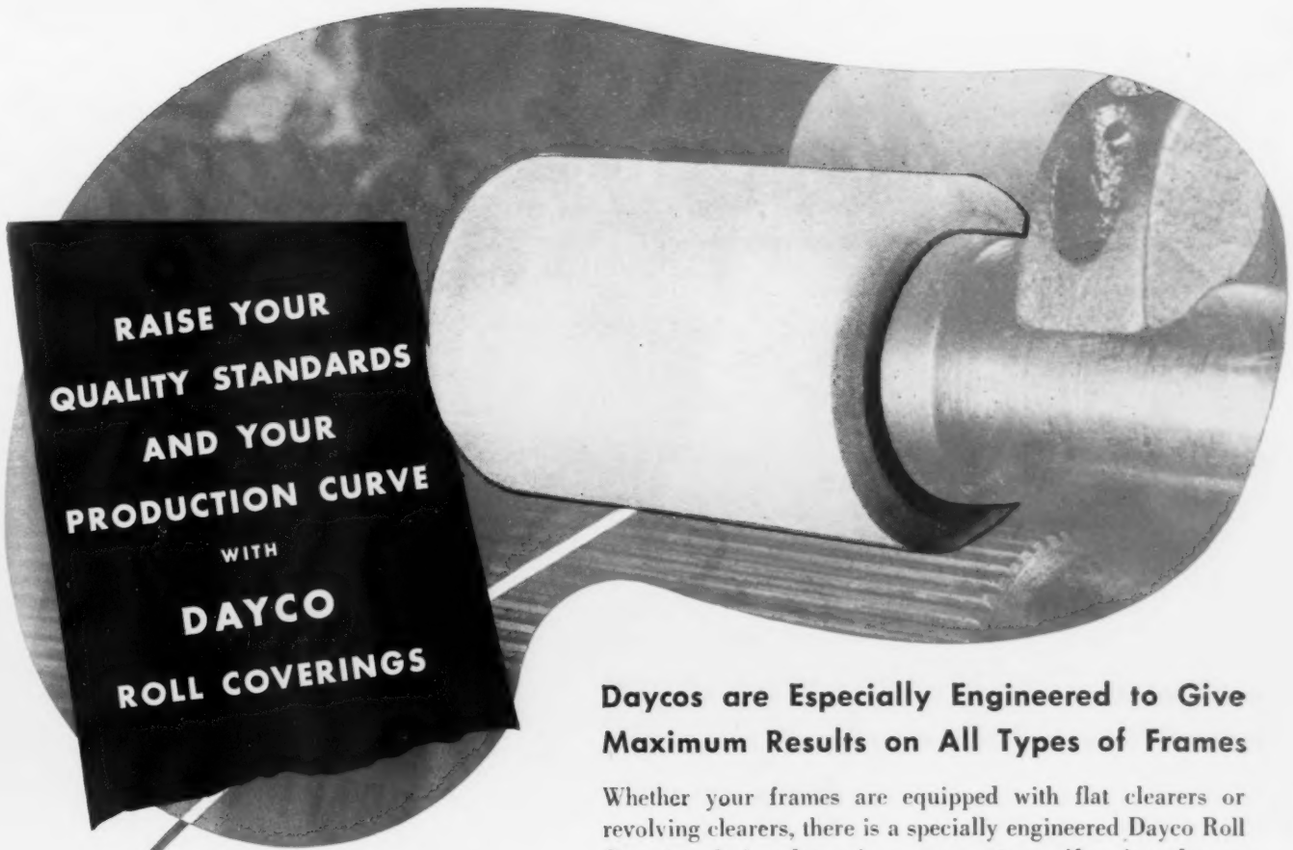
Completely installed on any type size box without interruption to production the Brown Size Box Temperature and Level Control System consists of a Brown Recording Thermometer Temperature Controller (Air-operated), two Size Box Level Stainless-Steel Electrodes with necessary valves and relays.

Where the Brown Size Box Control System is installed it has paid for the initial investment many times over. Learn more about it — Write The Brown Instrument Company, a division of Minneapolis-Honeywell Regulator Co., 4509 Wayne Avenue, Philadelphia 44, Pennsylvania. Offices in all principal cities. Toronto, Canada; London, England; Stockholm, Sweden; Amsterdam, Holland.

Boston, Mass.: 799 Beacon Street—Atlanta, Ga.: 4 N. Rhodes Center

BROWN THERMOMETER CONTROLLERS

and MINNEAPOLIS HONEYWELL CONTROLS



RAISE YOUR QUALITY STANDARDS AND YOUR PRODUCTION CURVE WITH DAYCO ROLL COVERINGS

HERE ARE IMPORTANT REASONS WHY YOU SHOULD USE DAYCOS

1. Large reduction of ends down.
2. More foreign elements removed from yarn.
3. Specially compounded for uniform wear, lengthening service life.
4. Equally effective for special types of synthetic and synthetic blends of yarn.
5. Decreases flying lint in spinning room.
6. Not affected by temperature changes.
7. Oil resisting and static free.
8. No grooving—less ends down.
9. Easy to apply.

Daycos are Especially Engineered to Give Maximum Results on All Types of Frames

Whether your frames are equipped with flat clearers or revolving clearers, there is a specially engineered Dayco Roll Covering designed to give you greater uniformity of yarn and increased production.

Dayco Roll Coverings do this because they have ideal cushion, exactly the right coefficient of friction and are unaffected by humidity changes or temperature extremes throughout an exceedingly long life. Their surface is so tough that it never grooves, hollows out, flattens or distorts. Since Daycos are static free, lapping up is practically unknown.

Daycos lower your costs, too, because accurate accounting records have proved that the cost-per-hour of operation with Dayco Roll Coverings is definitely less.

Check the nine advantages listed below which you get with Dayco Roll Coverings. Then let us prove these specially engineered cots can help you raise both your quality standards and your production curve. Write today for complete information.

THE DAYTON RUBBER MANUFACTURING COMPANY
DAYTON 1, OHIO WAYNESVILLE, N. C.
MAIN SALES OFFICE: WOODSIDE BLDG., GREENVILLE, S. C

SPECIAL TYPES OF ROLL COVERINGS ARE AVAILABLE FOR FRAMES EQUIPPED WITH FLAT AND REVOLVING CLEARERS

Dayton Rubber

FAMOUS DAYCO SYNTHETIC RUBBER PRODUCTS SINCE 1934

Big News for Cotton

THE PERFECTING of superior synthetic materials for belts in high-draft spinning has now minimized the maintenance problem in belt systems. Therefore we feel that the present is an appropriate time to add a belt system to our line of high-draft cardroom and spinning machinery.

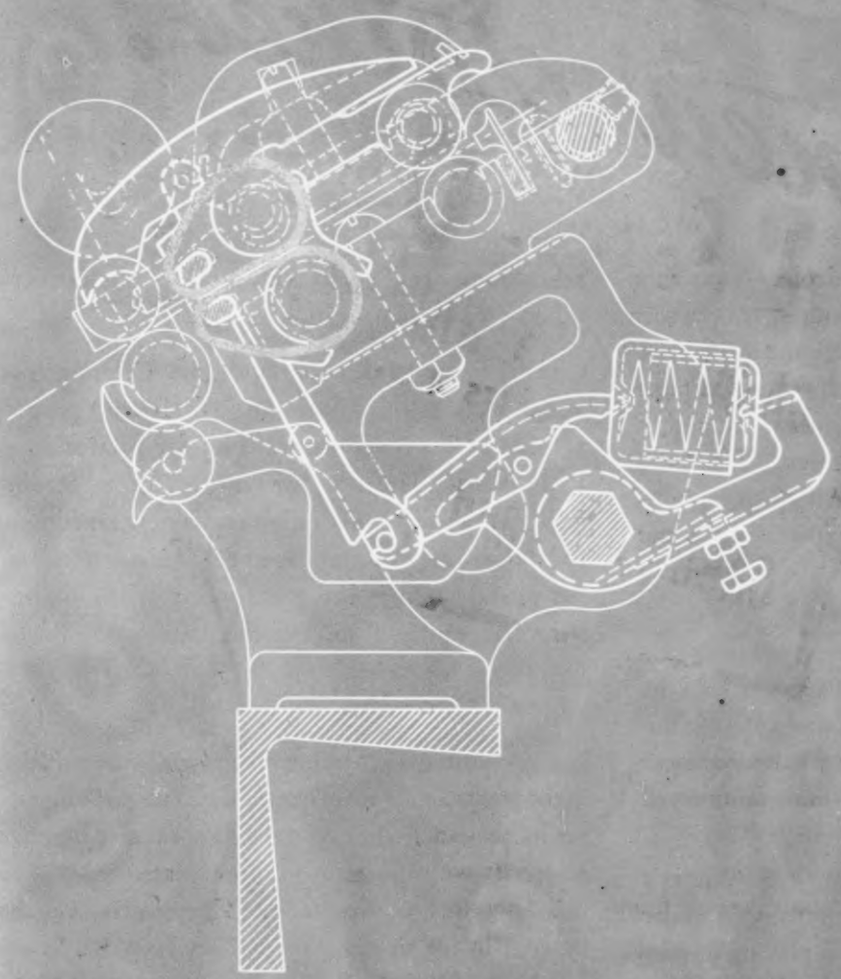
This belt system will be *in addition* to our well known 4 roll long draft spinning and 5 roll scroll condenser systems, which we will continue to recommend when they seem more suitable for the job.

In adding the belt system to our family of long draft we were satisfied with nothing but the best. Therefore we have obtained manufacturing rights for the Casablancas High Draft Systems. This company specializes in high drafting and nothing else and has continually perfected their system over a period of years.

H&B AMERICAN

and Rayon Spinning Mills

H & B CASABLANCAS IMPROVEMENTS



NEW TYPE CRADLE

This cradle is simplicity itself, made for cleanliness and ease of handling as well as for the utmost in fiber control, resulting in stronger and evener yarn.

AUTOMATIC WEIGHTING

This method of weighting has been described by one of the leading textile machinery makers as "a striking step forward in the design of ring spinning frames". In practice results have proved to be better than those obtained by conventional weight and lever methods.

★

No Lever Screws

No adjusting

Cleanliness

Nothing on the Roller Beam.

No weights or weight wires.

★

We can now offer you the best system for your individual requirements. This is a matter which can best be decided on by consultation with our engineers.

Write us for an appointment to survey your requirements. No obligations.

MACHINE CO.

PAWTUCKET, R. I., U. S. A.

BOSTON OFFICE, 161 Devonshire Street
ATLANTA OFFICE, 815 Citizens & Southern National Bank Building
CHARLOTTE OFFICE, 1201-3 Johnston Bldg.

America needs a LOT of new clothes!

IN FACT, a complete new wardrobe—women's dresses, men's suits, children's clothes, underwear, shirts, hosiery—is needed by the American family. And all kinds of home furnishings as well—from curtains and draperies to sheets, rugs and blankets. The urgent need for civilian textile products—intensified by the requirements of returning service men and women—presents both a challenge and an opportunity to the textile industry. And added to this is the wide-spread demand for textiles for industrial uses.

To meet this challenge requires a program of expansion throughout the textile industry. Particularly in the field of synthetic textiles, which because of their immense versatility are highly adaptable for development and expansion, plans call for greatly increased production.

Celanese Corporation of America—the country's largest producer of cellulose acetate yarn, sold under the familiar trade mark "Celanese"—is playing its part with a program of expansion in production totalling more than $25,000,000 for additional plant equipment. Some of the projects are now under construction, others already in operation.

At Cumberland, Maryland, the Celanese plant, which already employs more than 10,000 people, is substantially expanding facilities for producing synthetic yarns. The new weaving plant at Staunton, Virginia, is now in operation and a new knitting mill at Bridgewater, Virginia, is under construction. Staple fibre production is being expanded at the Narrows, Virginia, plant, and spun yarn capacity at the Burlington, North Carolina, plant. A brand-new yarn plant is planned at Rock Hill, South Carolina.

Celanese is also carrying on a program of expansion in the plastics field to meet greatly accelerated demands for its plastics materials. This long-range program of research and production in three related fields of synthetics—textiles, plastics and chemicals—will help make a lot of things America needs available more quickly. Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

Celanese* TEXTILES... PLASTICS... CHEMICALS

*Reg. U. S. Pat. Off.

Copyright 1946, Celanese Corporation of America

Whatever Dame Fashion decrees
anywhere in the world,
National Aniline stands ready
with every class of aniline
dye and color to produce
an unvarying color match.
For many, many years we have
served all textile centers here
and abroad . . . in every field
where color is used.
WHEREVER COLOR IS USED
National Aniline
DIVISION OF
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET NEW YORK 6, N. Y.
BOSTON • PROVIDENCE • PHILADELPHIA • CHICAGO • SAN FRANCISCO • CHARLOTTE
GREENSBORO • ATLANTA • NEW ORLEANS • CHATTANOOGA • PORTLAND, ORE. • TORONTO
pagano

L. F. Dommerich & Company

Executive and General Offices

271 MADISON AVENUE
NEW YORK, N. Y.

Telephone: AShland 4-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

ESTABLISHED 1840

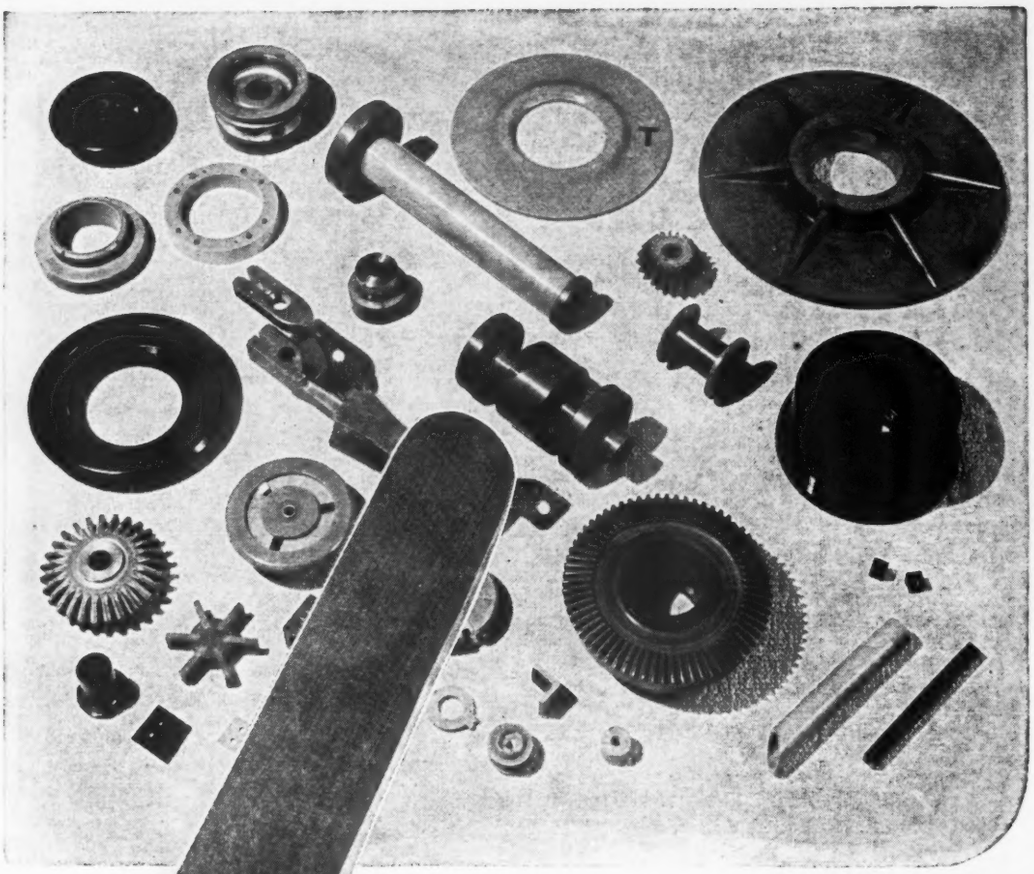
LAWRENCE CALFSKINS

First Choice in Aprons

More mills specify Lawrence Calfskins than any other apron type. This is because Nature gives calfskin the ideal drafting surface—and Lawrence gives its brand the benefit of unsurpassed laboratory facilities and modern equipment . . . If you, too, regard yarn *quality* more highly than price . . . specify Lawrence Calfskin—the material that keeps its quality much longer in service, and has kept its reputation much longer over the years . . . A.C. Lawrence Leather Company, Peabody, Mass., manufacturers of Lawrence Spinna Calf for roll coverings. Represented by H. H. Hersey, Greenville, S.C.

A.C. LAWRENCE LEATHER CO. TEXTILE LEATHERS PEABODY

EVERY YEAR MORE PEOPLE DECIDE LEATHER IS BEST



SMOOTH, LONG WEARING, CHEMICALLY RESISTANT!

FORMICA parts have many qualities that enable them to perform functions in textile machinery better than they were ever performed before.

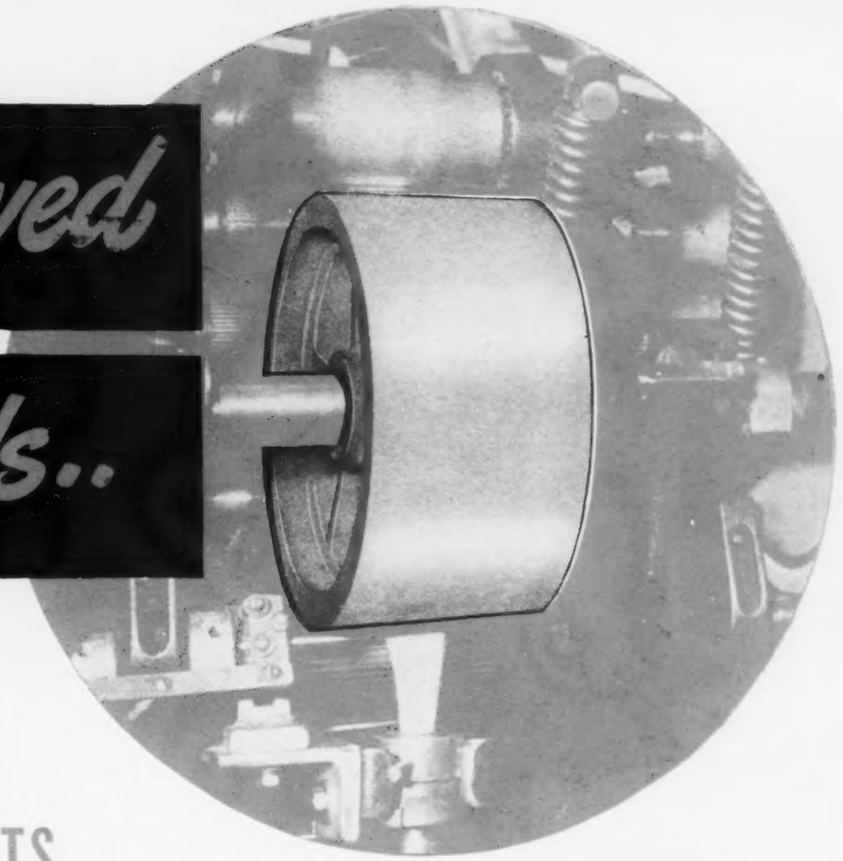
Formica is smooth, and wears smooth without splintering or shattering so that it is ideal for parts that might become rough and snag delicate threads.

Formica is non-absorbent and chemically inert. Therefore, it cleans easily and dyes can be washed off in a jiffy. Its chemical resistance enables it to provide exceptionally long-lived parts in rayon manufacture where strong solutions are necessary and high speed operation is required. Among many mechanical applications are: silent gears, tenter frame openers, loom box linings, separators, picker sticks, inspection table tops, knitting machine platforms, twisting caps, reeling caps, bucket covers. Engineering test data on the material is available on request.

FORMICA

THE FORMICA INSULATION COMPANY, 4668 SPRING GROVE AVENUE, CINCINNATI 32, OHIO

Mill-Proved Records..



show that DAYCO WOOLEN and WORSTED COTS outlast other types of cots *over 12 times*

After years of service, Dayco cots retain their original coefficient of friction and resiliency . . . without a sign of grooving or other deterioration. They give this kind of record service because they are designed and engineered for their job . . . and because they are made of *specialized* rubber which is not affected by moisture, temperature extremes, or other adverse operating conditions.

It will pay you to write for complete information today.

THE DAYTON RUBBER MANUFACTURING COMPANY
Factory: Waynesville, N. C.
Main Sales Office: Woodside Building, Greenville, S. C.

Eight reasons why you should standardize on Dayco Woolen and Worsted Cots

1. Outlast others 12 times and more.
2. High yarn uniformity — less matching up.
3. Save time, labor in pressure adjustments after shutdowns.
4. Reduce power requirements.
5. Cut arbor applying time as much as ⅔.
6. Roll replacement cut to absolute minimum.
7. Any combination of wool, rayon, mohair run equally well.
8. Simplify production schedules.

Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

FAMOUS *Dayco* SYNTHETIC RUBBER PRODUCTS SINCE 1934

Baa! Baa! . . Mrs. Sheep– Have you any wool?

Yes, sir! Yes, sir! 10 DIFFERENT KINDS!

AS every good wool and worsted mill man knows, the "three bags full" the sheep offered in the nursery rhyme were not an unmixed blessing.

Even when it is carefully sorted into half bloods, quarter bloods, 64's, etc., every bag of wool seems to have individual characteristics that may often complicate its processing.

That's why woolen and worsted spinning remains almost as much an art as it is a science.

And that's why leading woolen mills enlist the experience of the Victor Service Engineer when it comes to a question of travelers for spinning or twisting.

The Victor Service Engineer is thoroughly mill-trained – a man who "talks your language" – and is fully equipped with information on handling any fiber. Mill men throughout the industry – who know the importance of the *right* traveler – have chosen Victor Travelers for over 8,000,000 spindles of spinning and twisting – ample proof that Victors pay off in performance.

Write, wire, or phone the nearest Victor office . . . for *prompt* service.

Wool Spinning Card Room Chart Free on request. Gives the approximate grain weight of travelers for front roll speeds 85 to 100 . . . also a Comparative Rayon Denier Yarn Table. Write for your copy today.

VICTOR Ring Travelers

Victor Ring Traveler Company

PROVIDENCE, R. I. — 20 Mathewson St. — Tel. Dexter 0737

GASTONIA, N. C. — 173 W. Franklin Ave. — Tel. 247

They Belong in Good Company

Ahcovel-E and **Ahcovel-F** (substantive softeners for cotton, rayon, acetate, linen and nylon) "belong in good company". Being alkaline, they may be used with gas inhibitors and also fast-to-light colors to preserve maximum fastness.

THEY BOTH HAVE THESE ADDITIONAL PROPERTIES

1. Provide a velvety soft finish.
2. Do not affect shades of dyed fabrics.
3. Resistant to repeated washing and dry cleansing.
4. White paste products, producing a non-greasy, odorless finish, which will not discolor, or develop odor with heat, age or light.
5. Easy to apply; economical to use.

AHCOVEL-E

—was originally developed for hard twisted fabrics where good draping qualities are normally difficult to obtain—such as hard twist acetates and nylons. It flexibilizes the fibres.

Data sheets on request.

*Trade Mark Reg. Patented.

ARNOLD, HOFFMAN & CO., INC.

MANUFACTURING CHEMISTS

ESTABLISHED 1815 • PLANTS AT DIGHTON, MASS. & CHARLOTTE, N. C.

PROVIDENCE, RHODE ISLAND

NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE

New and Better
MULE ROPES

One More Way in Which J & B Mules Save Money On Maintenance As Well as On Production

Research at Johnson & Bassett's is not just a laboratory project, but a project in which practically our whole organization and our suppliers as well take part. As a result the improvement of J & B Mules is gradual, but almost continuous.

New and better mule ropes is our latest contribution to the reduction of maintenance and repair costs. These consist of the following: —

A 3/16" FLEXIBLE WIRE CABLE with a tensile strength of 4200 lbs., replacing a 7/16" cotton rope with a tensile strength of 672 lbs, for Squaring Band.

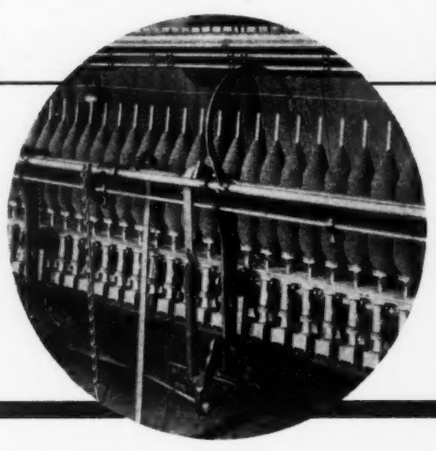
"PLYMOUTH" NYLON ROPE, which is 3½ times stronger than cotton rope. It is available for draft, drawing and rim bands, in sizes which require no alteration of existing equipment, and we are sole distributors in U. S. A.

Further details and prices on request.

JOHNSON & BASSETT, INC.
FOUNDED 1865
WORCESTER, MASSACHUSETTS, U.S.A.

ADVANTAGES OF J & B MULES OVER RING SPINNING FRAMES

1. Up to 50% saving in labor.
2. Up to 91% saving in H.P. per equal number of spindles.
3. Up to 50% saving in floor space per equal number of spindles.
4. Up to 75% saving in investment per comparable capacity.
5. The J & B Mule will handle a much coarser roving than a frame, thereby increasing production at the card by 15% to 20%.
6. The J & B Mule produces a true woolen yarn — superior in strength, elasticity, loftiness, roundness and uniformity of size and twist to that produced by frame spinning.
7. It permits inspection of the thread.
8. It will successfully spin short staple roving which will not hold together on a frame.
9. Spindle for spindle, it will produce as much yarn as a frame.
10. Its cost of upkeep is exceptionally low.
11. The J & B filling package does not require rewinding for an automatic loom.
12. Changes for spinning different types of yarn on the J & B Mule are easily and quickly made.
13. Mule bobbins cost less than frame bobbins.



Need Answers about Shearing Stainless?

Shear Blades?
What tolerances are recommended on blades for shearing E-S Type 304 Stainless? Can we use the same blades on E-S Type 316?

Fine Perforating?
What is the smallest diameter hole that can be accurately punched in 30-gage E-S Type 302 sheet, and what is the minimum spacing that will not tear between perforations?

Clearance for Blanking?
What die clearance should we use for blanking 6-in. circles in No. 7-gage E-S Type 410 plate?

Clean Slitting?
In slitting and drawing small louvres in E-S Type 321 Stainless, the metal sometimes strings across the slit. How can we overcome this?

Die Changes?
Will E-S Type 430 break out when stamped? Can we use the same dies in stamping E-S Type 430 that we use in stamping E-S Type 347?

Anneal to Trim?
After spinning E-S Type 304 bowls, we want the edge soft enough for trimming and corrugating, without a second anneal. Is this possible?

ask Eastern for the answer when Stainless is the question

Questions like these are "duck soup" at Eastern. Many of the answers are given in the big new catalog, "Eastern Stainless Steel Sheets," but if you have a specific question about cutting or shearing Stainless, be sure to ask Eastern...where your inquiry is welcome. JMLCo-E-B1

EASTERN STAINLESS STEEL CORPORATION
BALTIMORE 3, MARYLAND • Distributors stock available in most areas
CHICAGO · CLEVELAND · DALLAS · DETROIT · LOS ANGELES · NEWARK · PHILADELPHIA

SMITH-DRUM..

.... OFFERS THE ONLY

SPECIFICALLY DESIGNED TO HANDL YA

HERE, FOR THE FIRST TIME, is a completely integrated system especially designed for preparing, dyeing, extracting and drying yarn in package form. Each machine is the result of extensive research and experimentation to develop the best design for the specific purpose of handling packages . . . to eliminate the disadvantages of other types of machines and to provide many *new* advantages. This system results in faster, more uniform work . . . cuts costs . . . reduces labor

FORMULATING . . . This machine dyes a single package and is designed for laboratory use in determining the approximate formula to be used in the larger batch machine. It provides more accurate control of the formula, because the sample is dyed under exactly the same conditions as the complete batch.

FORMING . . . This machine properly prepares the package for dyeing by crimping the edges of the package to aid penetration of the dye liquor at that point.

DYEING . . . This machine, introduced by Smith-Drum several years ago, has completely revolutionized package dyeing. An entirely new type of package carrier and a radical departure in spindle design reduces resistance to flow, providing much greater flow of liquor through each package than the conventional types of machines. This greatly in

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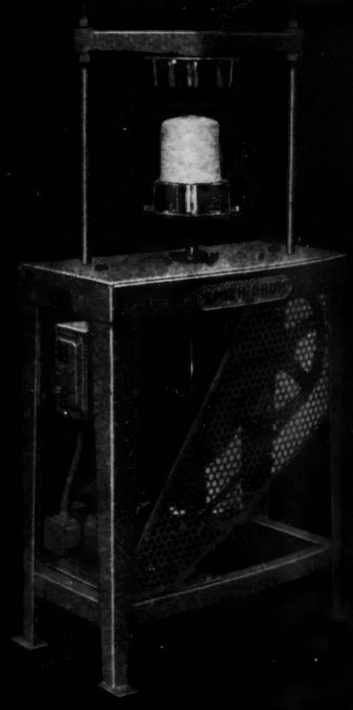
FORMING



Complete System
YARN IN PACKAGE FORM

creases the speed of dyeing and improves uniformity of results.

EXTRACTING . . . This brand new Smith-Drum machine reduces moisture content to *42% in 70 seconds running time!* This means a big saving in both steam and electricity in the drying process. It also reduces labor costs by simplifying loading and unloading so that even a girl can operate it. Complete cycle, including loading and unloading, is only 2 minutes. The machine also reshapes the package and prevents crushing of dye tubes.

DRYING . . . Another new Smith-Drum development, employing a new principle in package drying. Cuts drying time as much as 75% . . . saves up to ½¢ per pound of yarn! It uses less electricity . . . prevents migration of color . . . eliminates salt deposits. Yarn is delivered in better condition because of short drying cycle. Drying is more uniform than by other methods.

Complete information on any or all of these machines will be sent to you promptly upon request.

●

SMITH, DRUM & COMPANY
Allegheny Ave. at 5th St., Philadelphia 33, Pa.

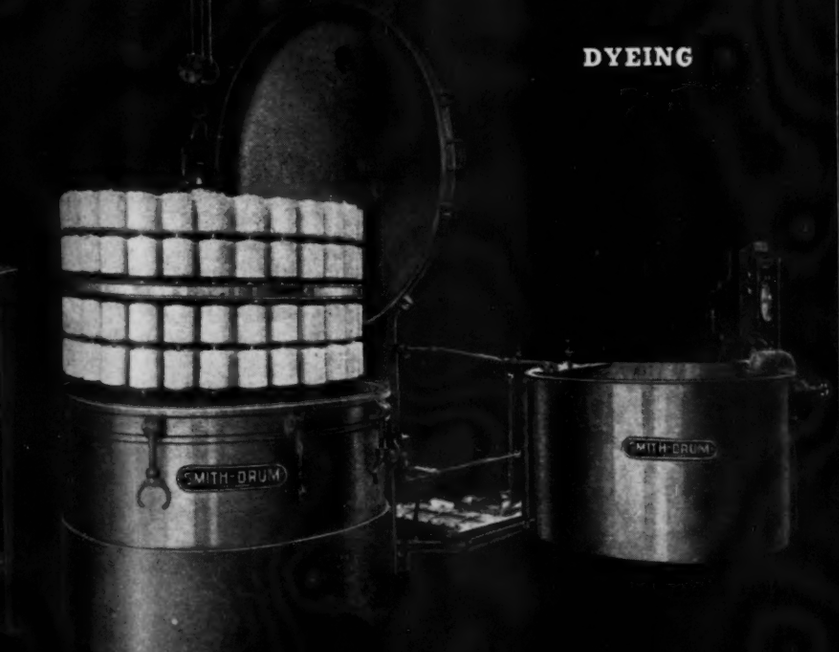
DRYING

Patents Granted and Pending

EXTRACTING

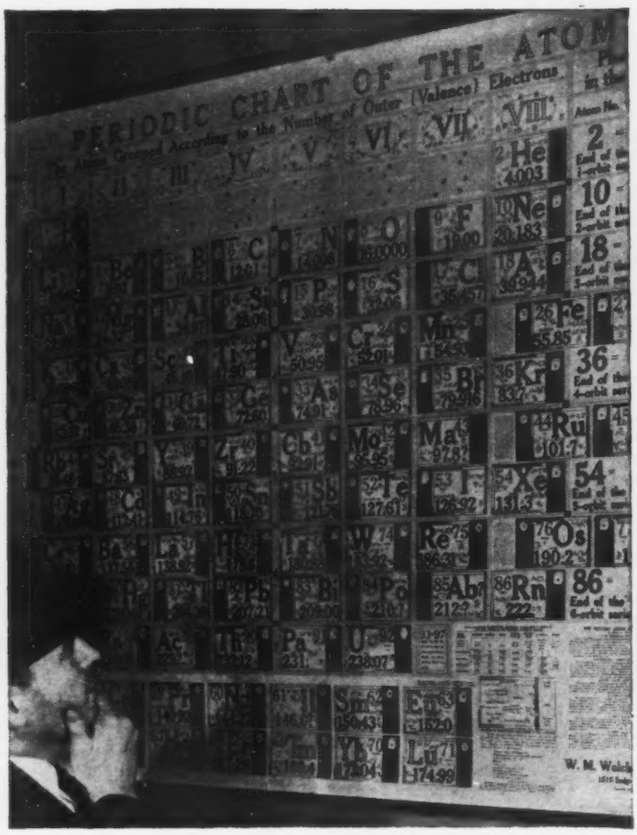
Patents Applied For

DYEING



Patents Granted and Pending

2 foolproof ways to buy Fluorescent Lamps



1

You could quit your job

for a decade or two and study the behavior of atoms and electrons. You'd have to understand charts like this, because a fluorescent lamp is an electronic device. And that would just be the beginning. You'd still have to combine your knowledge with that of 300 other physicists, chemists, metallurgists, engineers and other G-E scientists who have been working on lamp development for many years. That would be one way to know when you're getting the best fluorescent lamps . . .

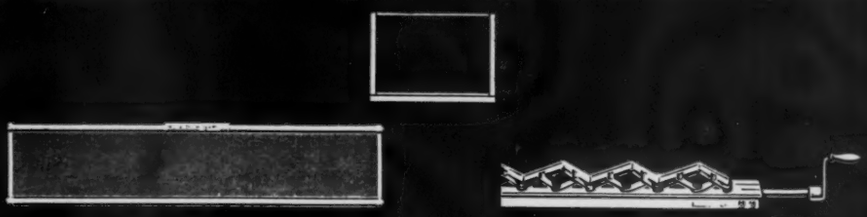
2

. . . or you can insist on the GE mark

when you buy fluorescent lamps for home or business. It identifies the lamps developed by the research organization that produced the first practical fluorescent lamp. *This same research is constantly at work to improve your G-E Lamps and make them Stay Brighter Longer.

G-E LAMPS

GENERAL ELECTRIC



QUALITY LOOM HARNESS EQUIPMENT

Ste-Hed-Co

Stainless Steel

FLAT HEDDLES & REEDS

have become most popular, and in many cases almost indispensable among mills weaving fabrics of acetate, nylon and combination yarns.

Manufacturers recognize the great value of

Stainless Steel

heddles and find them not only practical and successful but also the most economical. This is due to the non-adhesive nature of the stainless steel, granting a great saving of time and money in the cleaning of the harness.

Stainless steel reeds, combs and some warp preparation equipment are produced at our Philadelphia, Pa., Greenville, S. C., and Montreal, Canada plants in large volume, and wherever used are receiving the highest endorsement.

Our Research Staff is continually experimenting under all conditions with fibres of every type, and claims that the day is not far off when even drop wires and other parts contacting the acetate fibres will be available to you.

If you are not informed on this modern means of lowering costs—increasing production—and improving quality—write us or consult one of our Field Engineers.

STEEL HEDDLE MFG. CO.
2100 W. Allegheny Avenue, Philadelphia 32, Pa.

ALL WOUND ON THE FOSTER MODEL 102

1 — Knitting Cone. 2 — 6" perforated tube dyeing package. 3 — Warping Cone. 4 — Spring Tube Dyeing Package.

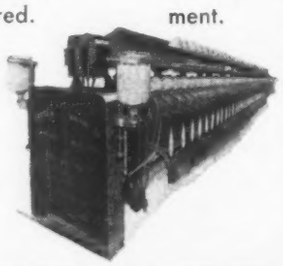
OTHER FLEXIBILITY FEATURES

1. This machine is equally suitable for winding cotton, wool, worsted, merino, mercerized, spun silk or spun rayon yarns. It is designed and built to resist the cutting action of hard worsted yarns. No expensive replacements are required.

2. It will produce 9 different angles of wind from 9° to 18°. Important if you radically change your count or type of yarn.

3. It will wind package dyed yarn, even if damp in the center of the package. No jumping out of guides.

4. It will wind emulsion treated yarn. In fact it is frequently equipped with an emulsion attachment.



5. Changeovers from cones to tubes, or vice-versa, are comparatively inexpensive.

6. One side can wind cones and the other tubes, if desired.

Send for Bulletin A-91

FOSTER MACHINE CO., Westfield, Mass., U. S. A.

Southern Office: Johnston Bldg., Charlotte, N. C.: Canadian Representative: Ross-Whitehead & Co., Ltd.: University Tower Bldg., 660 St. Catherine St., West, Montreal, Quebec.

THE KEY TO SUCCESSFUL TEMPERATURE CONTROL

SARCO
TR-21

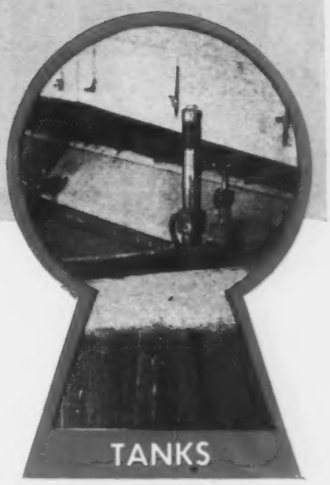
Thousands of dollars are involved in the difference between success and failure—of temperature control.

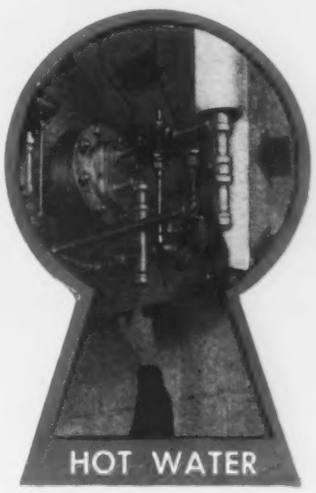
In process work—a degree or two difference means rejects. Failure means lost production

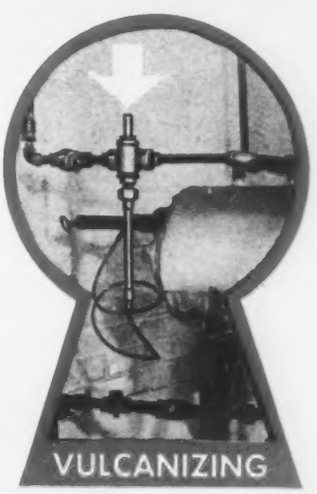
In hot water service—it's fuel economy and reliability that count most.

The Sarco TR-21 is self operated with a thermostatic element of the liquid expansion type. No stuffing boxes to stick or leak. All valves are equipped with packless seals. Temperature ranges: 0 to 400 degrees F.

This regulator has been outstandingly successful for all kinds of process, hot water, and liquid temperature controls since 1912. Its companion, the KR-14, is ideal for control of air and gases. Ask for Bulletin No. 600.







125

FOUR STARS ON OUR E PENNANT TESTIFY TO SARCO PERFORMANCE IN THE WAR EFFORT

ARMY E NAVY

SARCO SAVES STEAM

Represented in Principal Cities

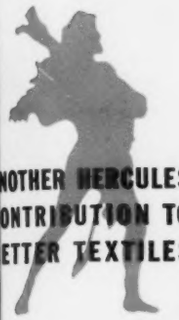
SARCO COMPANY, INC., 475 FIFTH AVE., NEW YORK 17, N.Y. • Sarco Canada, Ltd., 85 Richmond St., W., Toronto 1, Ont.

BODY-BUILDER

IT PAYS TO KNOW *MORE* ABOUT

HERCULES

THAT WON'T WASH OUT!



ANOTHER HERCULES CONTRIBUTION TO BETTER TEXTILES

With the release of Hercules ethyl cellulose from war demands, emulsions made with this material are again available for permanent, yet economical, textile sizes and printing pastes. Used like starch, to give "body" to sheeting, curtains, marquisettes, laces, for example, these water-thinned emulsions will not wash out or dust out. After fabrics are laundered, the handle is effectively restored on ironing.

When applied to textiles, ethyl cellulose in emulsion form "breaks." Some of the water is absorbed by the fabric, and a viscous, non-penetrating, continuous lacquer phase is left on the surface. In this manner voids are bridged, and excellent sealing is obtained. Another application advantage is minimum fire hazard.

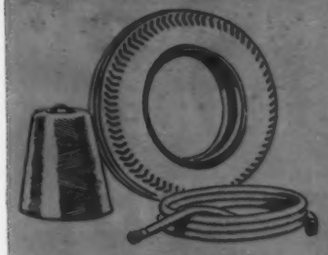
For printing compositions, these lacquer emulsions provide sharp, clear patterns that stay fixed. They give minimum build-up—even where designs are reversed or entail large areas of solid color.

Hercules produces the high-quality ethyl cellulose from which these emulsions are made. Return coupon for technical details and the names of manufacturers who can supply you with these new emulsions ready for use.

*Reg. U. S. Pat. Off. by Hercules Powder Company

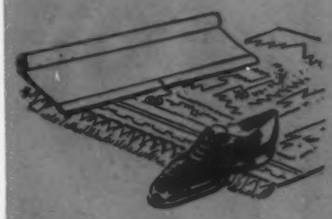
CHEMICAL MATERIALS FOR THE TEXTILE INDUSTRY

Other Hercules chemical materials for the textile industry include:



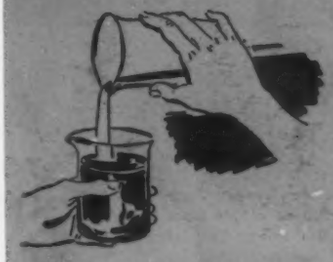
Chemical Cotton...
Basis for the toughest high-tenacity rayon for automobile tire cords and other industrial textiles.

Clorafin*...
Hercules low-cost chlorinated paraffin for flame- and water-resistant coatings for canvas and other textiles.



Flexalyn*...
An economical binder for corn and other starches for back-sizing carpets, shoe and tag cloth filling, window shades.

Pine Oil...
Yarmor* 302-W pine oil is a low-cost wetting agent and penetrant used in wet processing all textile fibers.



Terposol* 8...
One of a series of solvents and plasticizers for textile chemicals. An excellent dispersant for pigments.

Nitrocellulose...
Hercules nitrocellulose and ethyl cellulose are the basis for rapid drying, durable, brilliant textile coatings.

FOR FURTHER DETAILS

HERCULES POWDER COMPANY
INCORPORATED
994 Market Street, Wilmington 99, Delaware

Please send names of manufacturers who can supply ethyl cellulose emulsions. Check here ( ) if you wish technical details.

*Name*_____

*Title*_____

*Company*_____

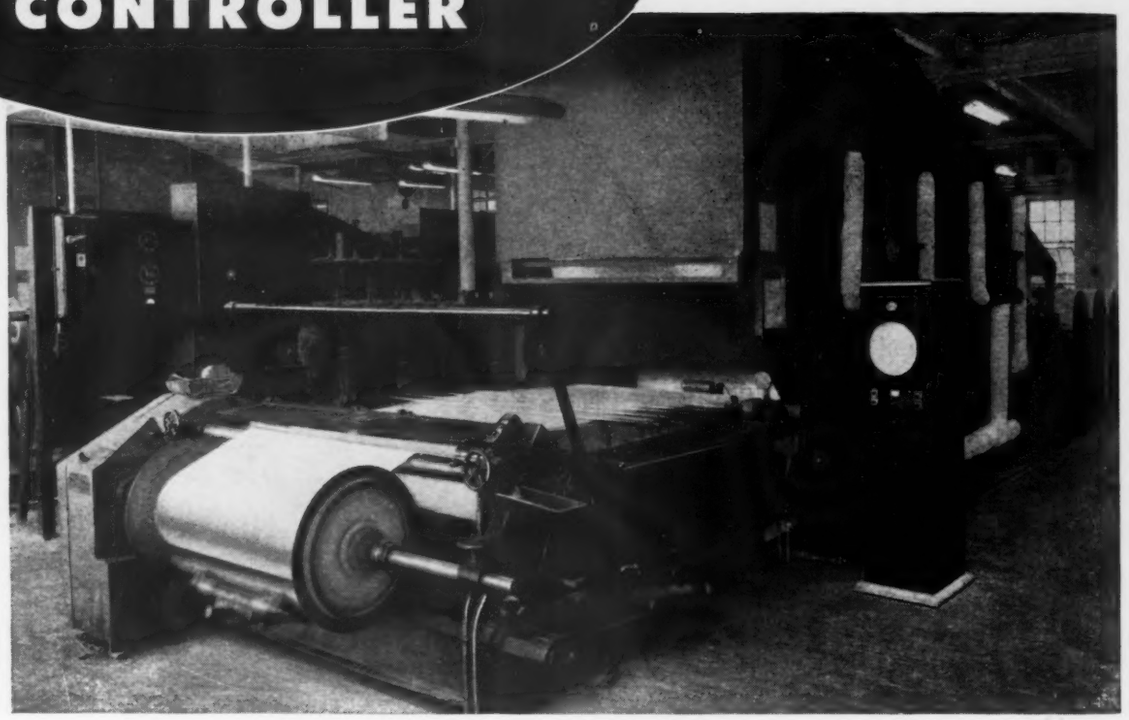
*Street*_____

*City*_____ *State*_____

T-62

BARBER-COLMAN MOISTURE CONTENT CONTROLLER

AUTOMATIC ELECTRONIC CONTROL OF REGAIN AT THE SLASHER GIVES MORE UNIFORM QUALITY PRODUCT AND INCREASED PRODUCTION



A GOOD INVESTMENT

TO PROVIDE SUBSTANTIAL IMPROVEMENT IN WARP QUALITY AND PRODUCTION

The Barber-Colman Moisture Content Control System will permit a slasher to be safely operated at maximum temperature, and therefore at the highest speed possible, to produce maximum yardage *with uniform moisture content.* Investment in Barber-Colman controls will provide a good return through increased production and improved quality from existing slasher and slasher room equipment.

Specifically, the Barber-Colman Moisture Content Control System will:

1. Eliminate warp spoilage by maintaining uniform and proper moisture content.
2. Increase production from existing slashers.
3. Increase weave room efficiency by delivering more uniform and better quality warps.
4. Reduce slashing costs by producing maximum pounds of warp with minimum pounds of steam.
5. Reduce cost of goods by allowing lower relative humidity in the weave room without sacrifice of quality.

For data on the possibility of applying Barber - Colman Moisture Content Control in your mill, *see your Barber-Colman representative.*

For details on the principles, features, advantages, and the benefits to be gained from Barber - Colman Moisture Content Control equipment, send for this brochure. Ask for Bulletin F-1705-1.

Barber-Colman Company

45 YEARS EXPERIENCE SERVING TEXTILE MILLS

ROCKFORD ILLINOIS · BOSTON MASSACHUSETTS · GREENVILLE SOUTH CAROLINA · GREENSBORO NORTH CAROLINA · ATLANTA GEORGIA

Inspirations in underwear fabrics that call for Torrrington Needles

KNITTED FABRICS have long been recognized as the *ideal* for underwear because of their flexibility, comfort, strength and "breathing" qualities. But today, along with these qualities, successful underwear fabrics must possess exceptional beauty, fineness of texture and offer a variety of patterns. Typical of the trend are the remarkably durable knitted rayons shown here.

Such knitting demands fine needles...needles with the extra fine temper and smooth finish that Torrington machine-manufacturing methods have made available. As you plan to meet competition, remember—there's a Torrington machine-made needle for this and every type of knitting.

THE TORRINGTON COMPANY

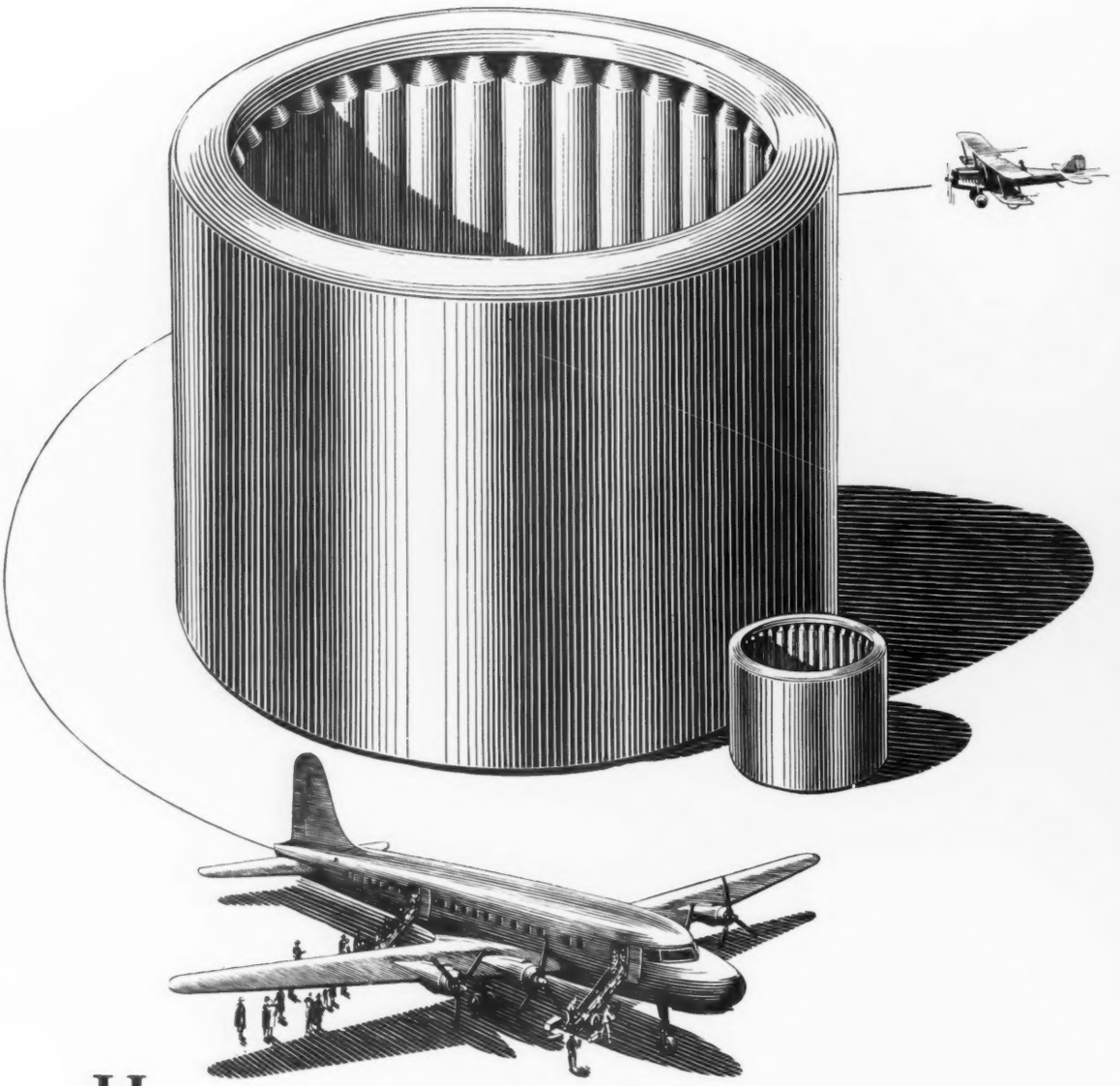
Established 1866

Torrington, Conn., U.S.A.

Branches: New York • Philadelphia • Chicago
Green-boro, N. C. • Boston • St. Louis • Toronto, Canada

TORRINGTON

Latch Needles



Here's One Way to Pack More Payload* into Your Product...

Weight-reduction is important in many fields other than aircraft . . . in fact, it's the order of the day in design of machines, tools, appliances and handling equipment.

That's why the weight-saving, space-conserving features of anti-friction Torrington Needle Bearings are so important. For the full complement of small diameter needle rollers gives a tremendous radial load capacity in an extremely small and compact unit. Furthermore, the bearing is designed for mounting in the simplest type of housing—a bore machined to proper dimensions . . . and installation is a simple press-fit operation.

These features, contributing directly to weight-and-space-saving designs, are enabling many manufacturers to increase the payload* of their products by improving the "*operating efficiency-weight ratio.*"

Let us give you the full story of Needle Bearing advantages in terms of your own design requirements. Considerable engineering and application data are available in the Torrington Needle Bearing Catalog No. 32, furnished upon request. Our engineering department will be glad to work with you on any specific design or application problem.

THE TORRINGTON COMPANY

TORRINGTON, CONN. SOUTH BEND 21, IND.

Offices in All Principal Cities

TORRINGTON NEEDLE BEARINGS

BETTER PREPARE TODAY . . . . than regret tomorrow

This manufacturer plans to give his products a sales advantage through proper package design. That's why he's interested in the booklet, "Pack To Attract." This booklet might well mean a sales rebirth for your products, too. For your copy, write The Hinde & Dauch Paper Company, Executive Offices, 4608 Decatur St., Sandusky, Ohio.

TWENTY-THREE IDEAS FOR ONE LETTER

Perhaps you have thought: "How can I increase my sales through better packaging?" You will find the answer in "Pack To Attract," a booklet containing 23 packaging ideas that lead to more profitable packaging procedure. It shows how corrugated board, in the hands of H & D Package Engineers, is transformed into sales packages that protect in transit and attract at point-of-sale. It shows how modern packaging has become an outstanding sales influence. Get your packaging ready now—send for your copy of "Pack To Attract." The Hinde & Dauch Paper Company, Executive Offices, 4608 Decatur Street, Sandusky, Ohio.

H&D HINDE & DAUCH

PACE-SETTER OF THE PACKAGING INDUSTRY

FACTORIES IN: Baltimore • Boston • Buffalo • Chicago • Cleveland • Detroit • Gloucester, N. J. Hoboken • Kansas City • Lenoir, N. C. • Montreal • Richmond • St. Louis • Sandusky, Ohio • Toronto

PINS and LAGS
COTTON PICKER LAG — FLAT PINS
RAG OR SHODDY PICKER LAG
STEEL-FACED RAG OR SHODDY PICKER LAG
WASTE MACHINE MAIN CYLINDER
CARDING BEATER LAG

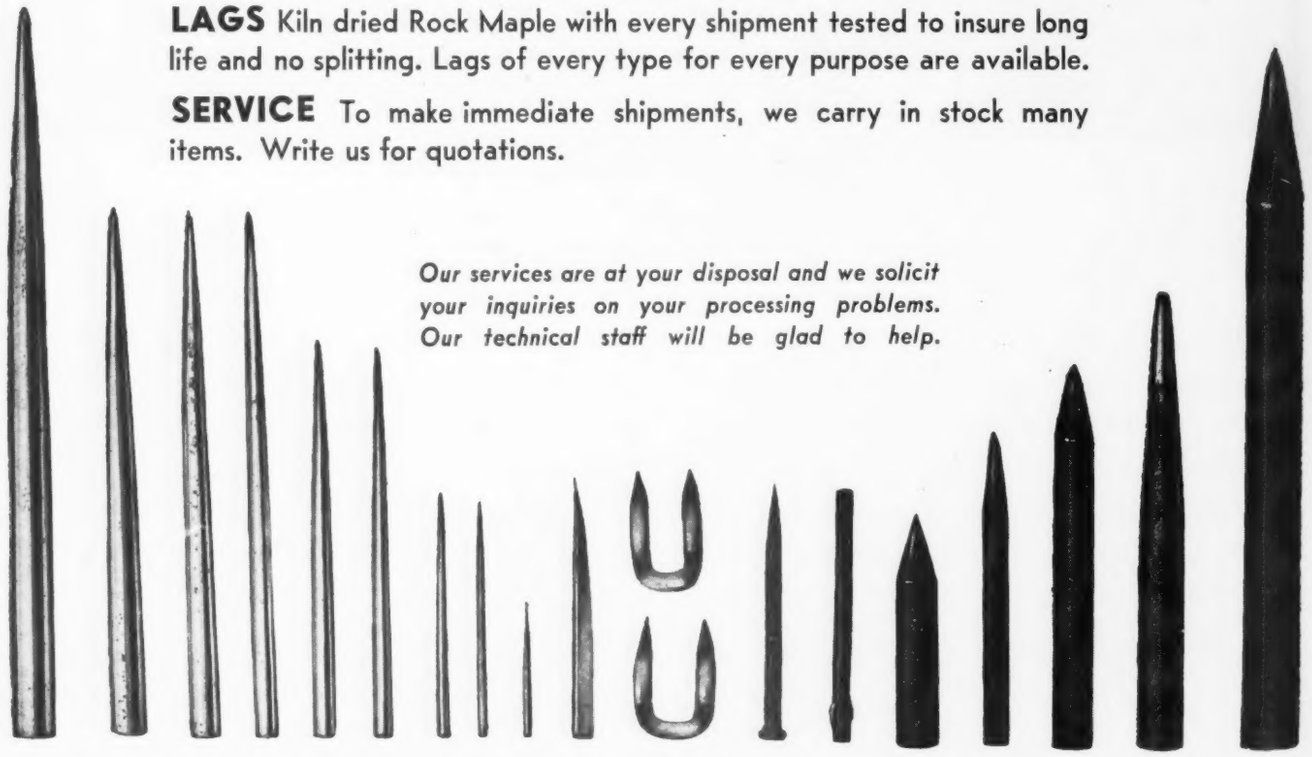
WE OFFER

PINS A completely new HARDENING and TEMPERING Department insures lasting quality and uniformity in the pins. We manufacture in any type.

LAGS Kiln dried Rock Maple with every shipment tested to insure long life and no splitting. Lags of every type for every purpose are available.

SERVICE To make immediate shipments, we carry in stock many items. Write us for quotations.

Our services are at your disposal and we solicit your inquiries on your processing problems. Our technical staff will be glad to help.

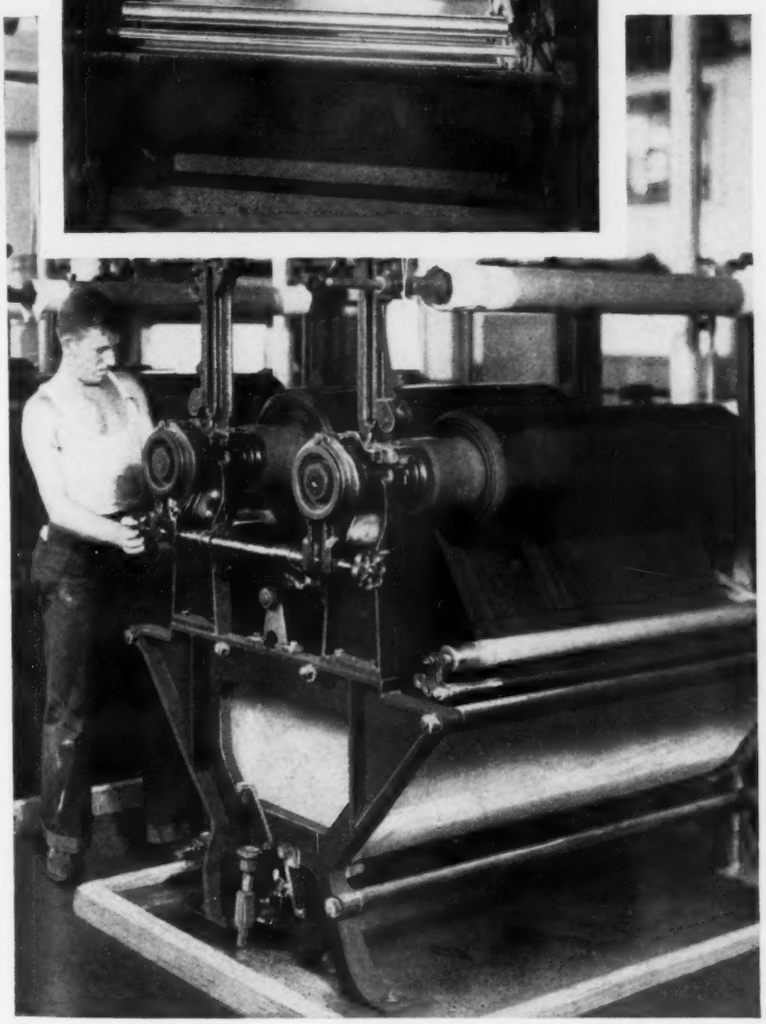


WILLIAM CRABB & COMPANY

301 - 3rd AVENUE, NEWARK, N. J.

TO SPEED UP COLOR CHANGING . . . TO AVOID "OFF" COLORS

– nothing equals Stainless Steel!



BECAUSE stainless steel is inert to practically all dyes, soaps and bleaching agents it will not contaminate dye baths. Colors are uniform, clear and brilliant as a result of its use.

But closer color control—which gives a dyer a premium on his goods—is not the only reason why dyers are turning more and more to stainless steel. The *time* that it saves, especially when pastel shades are being run through, is also a big factor in its favor.

With easy-cleaning stainless steel there is no color carry-over. A stainless steel dye vat can be changed from one color to another *in a matter of minutes* in contrast to the three or four days necessary when boiling out a wooden tank to remove the dye stuff that seeped into it from the previous bath.

Stainless steel has other advantages that set it apart for all kinds of dyeing, bleaching and other processing equipment. Strong, tough and practically everlasting, its hard, dense surface gives lifelong protection against rust, corrosion, rough use and abuse. And this goodness goes through and through, cannot wear off.

All these money-saving benefits of stainless steel you will find at their best in U·S·S Stainless—a perfected, time-tested steel. War production has greatly advanced our knowledge of stainless steel, has taught us many new ways in which to enhance its inherent advantages. Our engineers will gladly put this information at your service. Both users and builders of textile machinery will find their assistance extremely helpful.

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

AMERICAN STEEL & WIRE COMPANY, *Cleveland, Chicago and New York*
CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*
COLUMBIA STEEL COMPANY, *San Francisco*
NATIONAL TUBE COMPANY, *Pittsburgh*
TENNESSEE COAL, IRON & RAILROAD COMPANY, *Birmingham*
United States Steel Supply Company, Chicago, *Warehouse Distributors*
United States Steel Export Company, New York

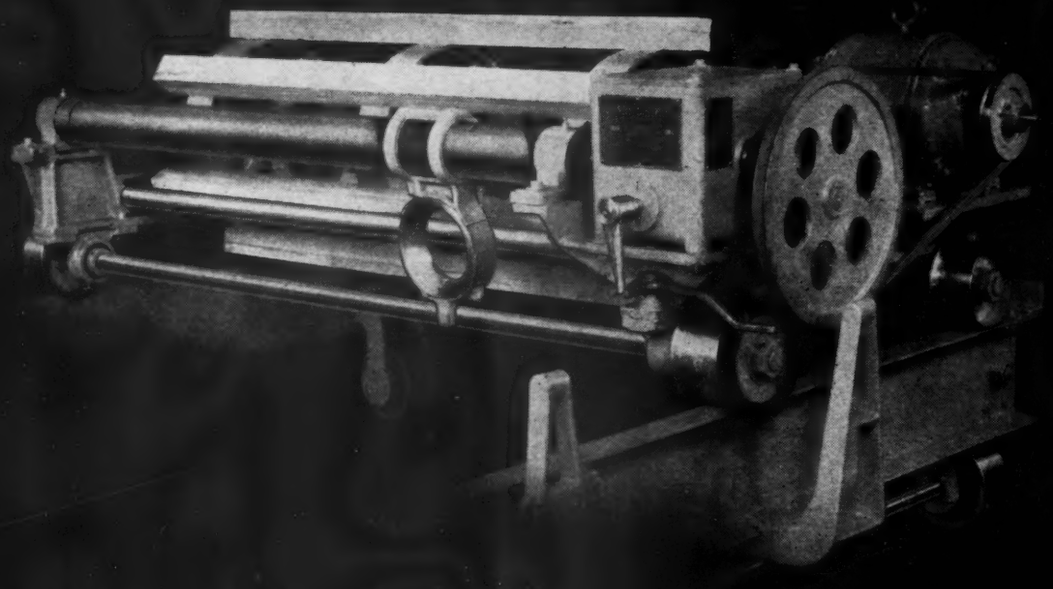
USS STAINLESS STEEL UNITED STATES STEEL

EVERY SUNDAY EVENING, United States Steel presents *The Theatre Guild on the Air*. American Broadcasting Company coast-to-coast network. Consult your newspaper for time and station.

UNITED STATES STEEL

PERKINS AUTOMATIC BIN PILERS

PATENTED



You cannot afford to pile by hand

B. F. PERKINS & SON, INC.

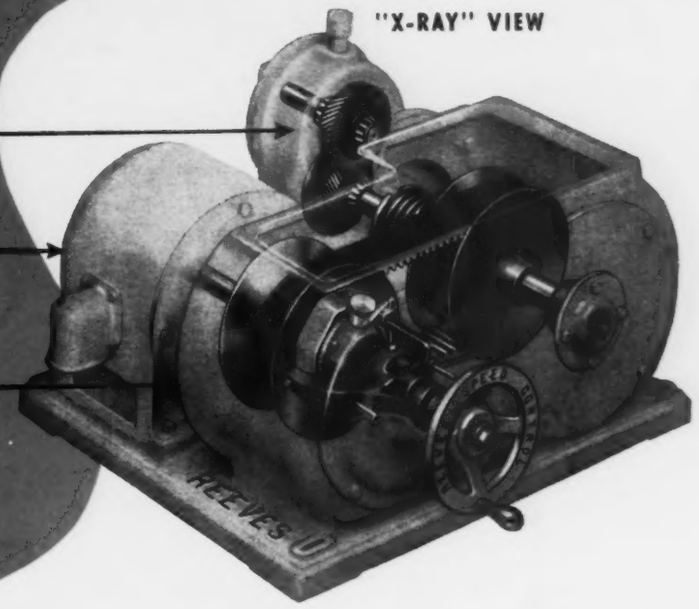
ENGINEERS AND MANUFACTURERS

HOLYOKE • • • MASSACHUSETTS

REEVES MOTODRIVE

Wraps up All Three in one compact package

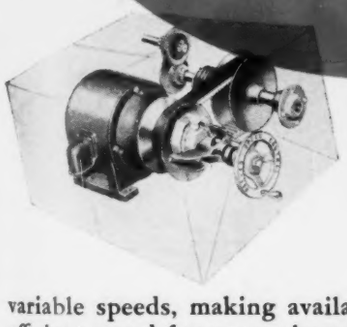
"X-RAY" VIEW



1 **GEAR REDUCER:** Single, double or triple helical type reduction gears, as required.

2 **CONSTANT SPEED MOTOR:** Any standard make, ball-bearing foot-type, may be specified.

3 **VARIABLE SPEED MECHANISM:** Time-tested REEVES speed varying mechanism for stepless speed adjustability.



The REEVES Motodrive is a complete, totally enclosed, accurate variable speed power plant. It will drive any production machine at infinitely variable speeds, making available instantly the most efficient speed for every changing condition.

This compact, modern variable speed drive is widely used where space is limited or where direct connection is desirable. An outstanding advantage is that any make, foot type, ball-bearing constant speed motor in standard NEMA dimensions may be specified.

Simple, rugged, dependable, the Motodrive utilizes the time-tested REEVES principle of a V-belt driving between two pairs of cone-shaped discs which are adjustable to form an infinite number of driving and driven diameters. *The transmission of power is accurate at all speeds.*

Two space-saving designs—horizontal and vertical—each built in six basic sizes from 1/4 to 15 h.p., covering ratios of speed range from 2:1 through 6:1. By reason of the many different sizes, speed ratios and reduction gear combinations available, you can obtain REEVES Motodrives with output speeds as low as 1.35 r.p.m.; others as high as 3,480 r.p.m. Handwheel control for speed shifting is standard, but Electric Remote is also available. Nation-wide engineering and service facilities. For full information on Motodrive and the two other basic REEVES units—Transmission and Vari-Speed Motor Pulley—write for 96-page catalog W-450.

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

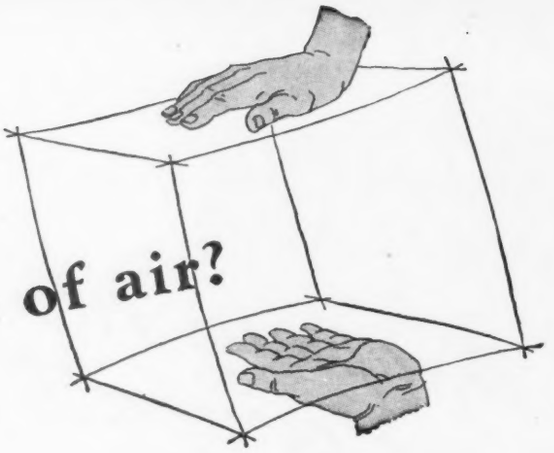
Recognized Leader in the Specialized Field of Speed Control Engineering

Accurate Variable

REEVES Speed Control

Gives the Right Speed for Every Job!

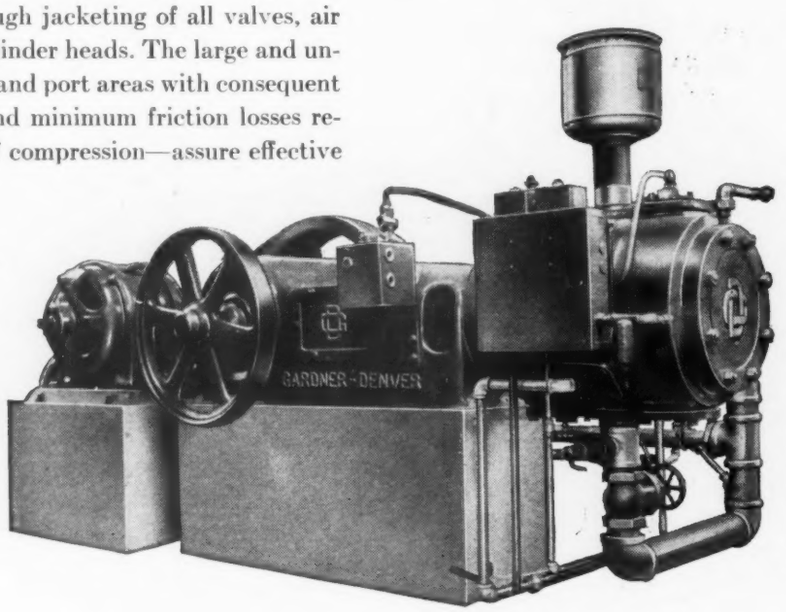
How much will it cost YOU to "squeeze" a foot of air?



Any air compressor will "squeeze" air for you. But how well will that job be done—how much power will it take to compress a cubic foot of air to the pressure you require?

The cylinder design of your compressor has a lot to do with that question. In the Gardner-Denver "RX" Horizontal Compressor, for example, the cylinders are of advanced design to provide higher volumetric efficiency and lower horsepower requirements. The air valves are located radially at each end of the cylinder to permit thorough jacketing of all valves, air passages and cylinder heads. The large and unrestricted valve and port areas with consequent low velocities and minimum friction losses reduce the heat of compression—assure effective lubrication. Add it up—it means *lower cost.*

For full facts, write Gardner-Denver Company, Quincy, Illinois; Atlanta, Ga.; Birmingham, Ala.; Boston, Mass.; Hazleton, Pa.; Knoxville, Tenn.; Washington, D. C.; New York, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.



Gardner-Denver "RX" Horizontal Single Stage Compressor—capacities from 89 to 1292 cu. ft. displacement per minute.

GARDNER-DENVER

Since 1859

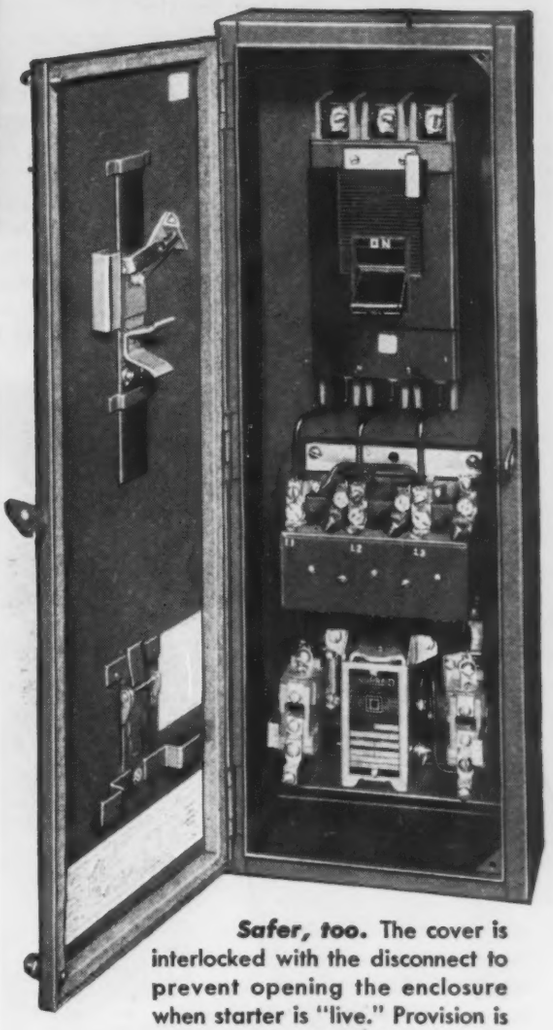
- No compressor is better than its valves—and in the "RX" compressor, Gardner-Denver duo-plate cushioned valves provide high compression efficiencies with lowest power consumption. These valves are "air cushioned" for long life.
- Rugged main frame is completely oil and dust-tight, yet provides easy access to all working parts.
- The entire lubricating system is positive, automatic and foolproof.
- Timken adjustable double row tapered roller bearings on crankshaft provide considerable overload capacity with consequent long life.

Square D Front-operated Combination Starters

● You save time by using combination starters. Since the disconnect (switch or breaker) and the magnetic starter are housed in one enclosure, you cut mounting time in half and also save wiring time.

A combination starter takes less space than two separate devices. These Square D front-operated units save still more space. They are especially suitable for "ganging."

Square D front-operated starters are available in three capacities—sizes 0, I, and II. Some types of larger sizes are side-operated. For informative bulletin, address Square D Company, Industrial Controller Division, 4041 North Richards St., Milwaukee 12, Wis.



Safer, too. **The cover is interlocked with the disconnect to prevent opening the enclosure when starter is "live." Provision is also made for padlocking the disconnect in the "OFF" position.**

SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

Bronze Valves with a Pedigree

The Powell Line of Bronze Valves for controlling intermediate steam, oil, water and gas is not an overnight development. Rather, it is a result of evolution through Powell's 100 years of practical, scientific progress in the art of valve-making.

Starting in the first generation with the celebrated "Star" Regrinding Globe Valve, invented and patented by James Powell, each succeeding generation of the Line has produced better and better valves. Today the nation-wide performance of Powell Bronze Valves definitely stamps them as "Valves with a Pedigree."

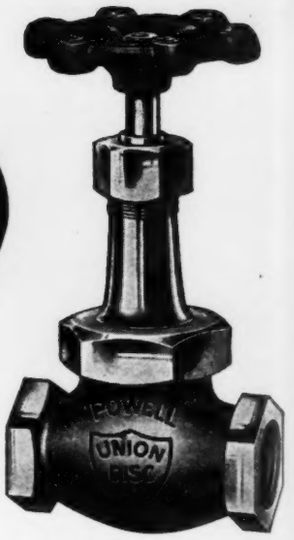


Fig. 150

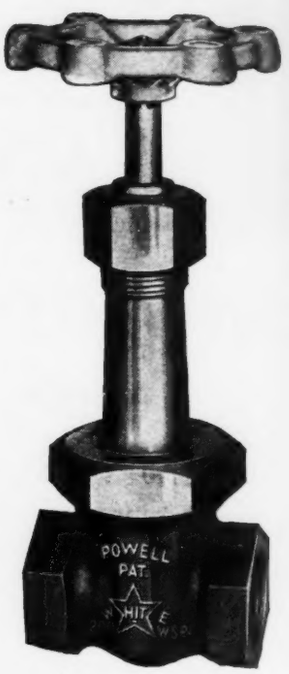


Fig. 375

Valves of Special Interest to the PULP and PAPER INDUSTRY will be exhibited at our BOOTH 54 20th Exposition of Chemical Industries Grand Central Palace, New York February 25 to March 2, 1946

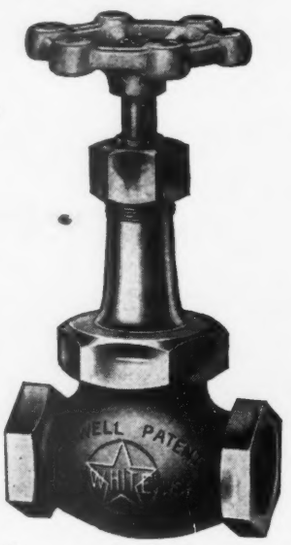


Fig. 1708

Fig. 1414

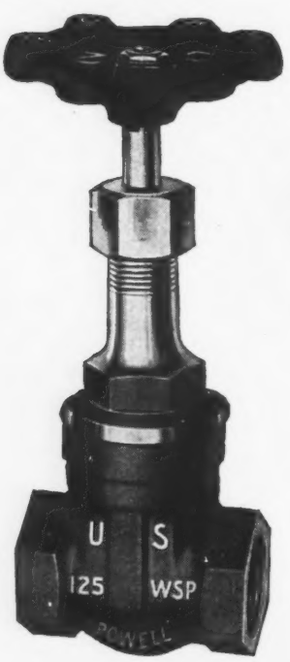


Fig. 500

Fig. 1414—125-pound Bronze O. S. & Y. Gate Valve with flanged ends.

Fig. 500—125-pound Bronze Gate Valve with screwed ends, inside screw rising stem and screwed bonnet.

Fig. 1708—200-pound Bronze Globe Valve with screwed ends, inside screw rising stem, union bonnet, renewable seat and regrindable, renewable wear resisting semi-cone plug type disc.

Fig. 375—200-pound Bronze Gate Valve with screwed ends, inside screw rising stem, union bonnet and renewable wear resisting seat rings and disc.

Fig. 150—150-pound Bronze Globe Valve with screwed ends, union bonnet and renewable composition disc.

The Wm. Powell Co., Cincinnati 22, Ohio

DISTRIBUTORS AND STOCKS IN ALL PRINCIPAL CITIES

POWELL VALVES

Typical of the many textile processing applications for lustrous ENDURO Stainless Steel are these 300-pound capacity package dyeing machines. Other applications include dry cans, boil-out machines, tables, valves, reels, hosiery forms and bleaching equipment.

- Improved Employee Relations
- Easy to Clean
- Assures "True" Colors
- Non-Contaminating
- Strong—Long Lasting
- Resistant to Rust and Corrosion
- Easy to Fabricate
- Universal Acceptance
- Low Ultimate Cost

Enduro Pays in many ways

Republic ENDURO Stainless Steel—the long-lasting metal that holds colors true and bleached whites pure—offers many profitable advantages for modern bleaching and dyeing operations.

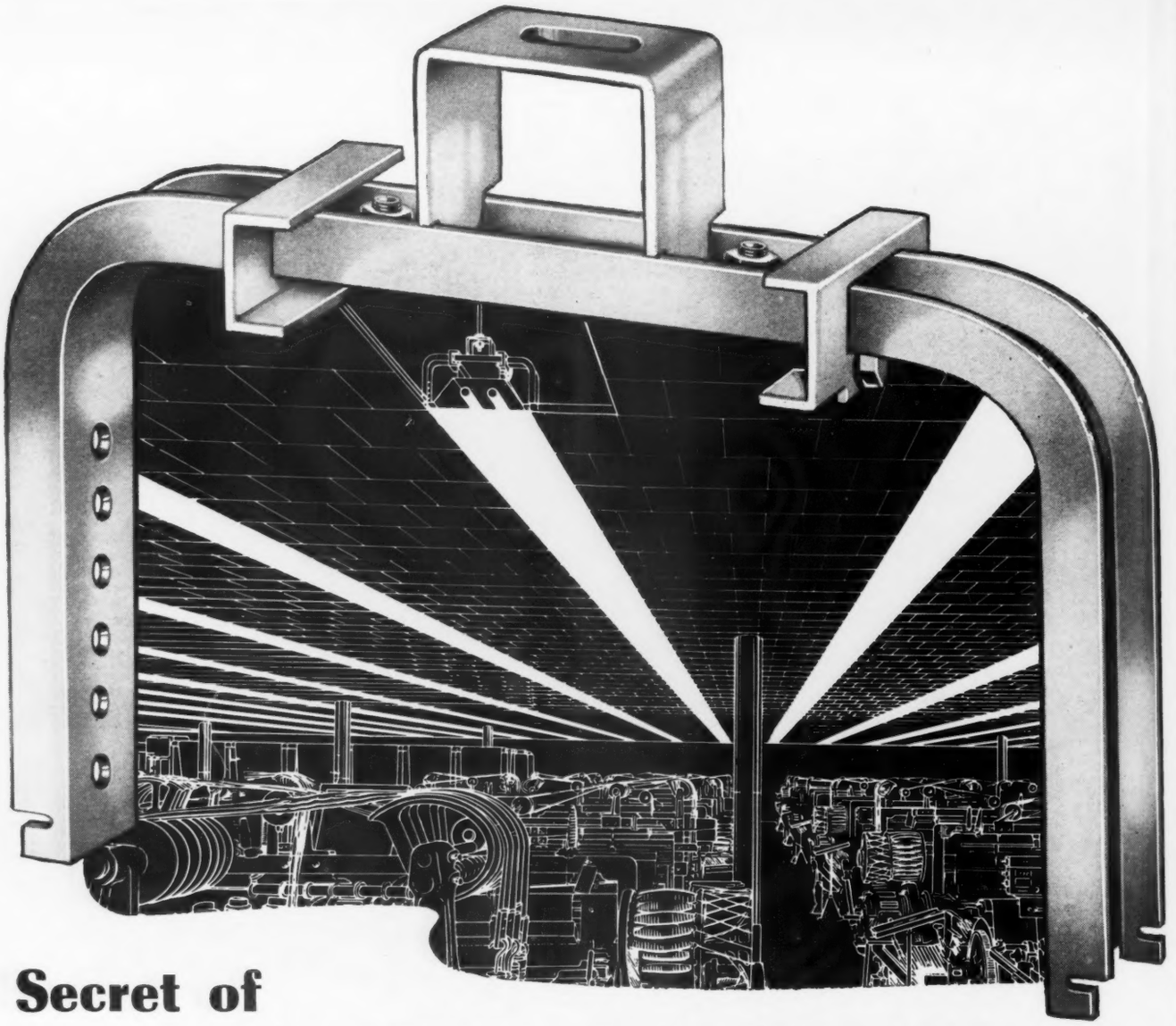
Unlike some materials, ENDURO has no effect whatever upon the most delicate color shades. Its smooth, hard surface is free from tiny pores which might carry contaminating material from one batch to another. It cleans quickly and easily . . . enables fast change from dark to light shades without danger of color carry-over.

There are many other reasons, too, why it will pay you to specify Republic ENDURO Stainless Steel in ordering new equipment. For complete details, write directly to:

REPUBLIC STEEL CORPORATION
Alloy Steel Division • Massillon, Ohio
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, New York

Republic
ENDURO STAINLESS STEEL
Reg. U. S. Pat. Off.

Other Republic Products include Carbon and Alloy Steels—Pipe, Sheets, Strip, Plates, Bars, Wire, Pig Iron, Bolts and Nuts, Tubing



Secret of CEILINGS UNLIMITED

. . . the patented Miller Ceiling Furring Hanger for any type furred ceiling

Exclusively Miller's, this ingenious hanger licks many old construction problems—without creating new ones. It is the "can do" behind today's trend of planning interiors *around the lighting.*

No more laborious fitting of recessed lighting into hung ceilings. Instead, simply hang Miller Ceiling Furring Hangers from the structural ceiling—and hang furring, tile and Troffer Lighting System *from the hangers!*

Less than half the usual supports are needed. This means savings—as well as more "above-ceiling space" for piping and air conditioning ducts. Savings in wire, wiring and conduit costs are also substantial. Quick leveling means are provided.

But that's just the beginning! The whole fascinating story is told in CEILINGS UNLIMITED. Miller engineers and distributors are in principal cities.

THE MILLER COMPANY • MERIDEN, CONNECTICUT

ILLUMINATING DIVISION
Fluorescent, Incandescent
Mercury Lighting Equipment

HEATING PRODUCTS DIVISION
Domestic Oil Burners
and Liquid Fuel Devices

ROLLING MILL DIVISION
Phosphor Bronze and Brass
in Sheets, Strips and Rolls

FOUNDRY DIVISION
Non-Ferrous Metal Castings

MILLER
SINCE 1844

HYSTER

Industrial Trucks do more work...

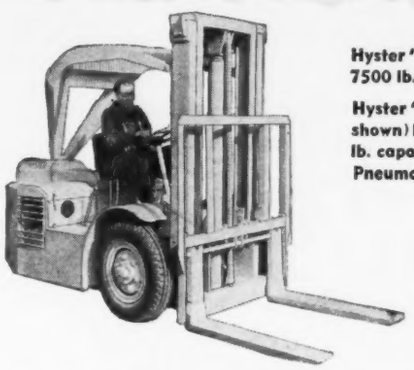
YOUR BUSINESS can cut handling costs and increase net profits when a Hyster industrial truck lifts, transports and stacks materials.

This mechanical expediter on wheels does an amazing amount of work—*saves time and money*—releases manpower for more productive jobs in factory, field or warehouse.

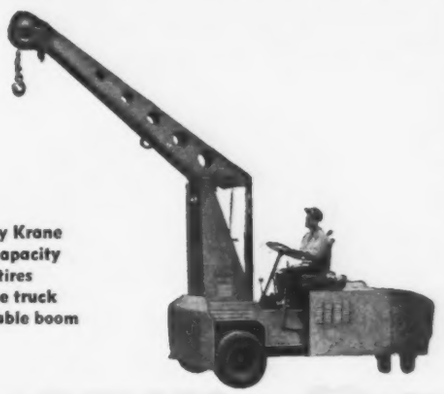
Hyster models range in capacity from 2000 lbs. to 30,000 lbs. All models are *pneumatic tired,* gasoline powered, engineered and built for fast, efficient, enduring service. Illustrated literature sent gladly . . . Distributor sales and service in principal cities.

Hyster "20"
2000 lb. capacity
Pneumatic tires

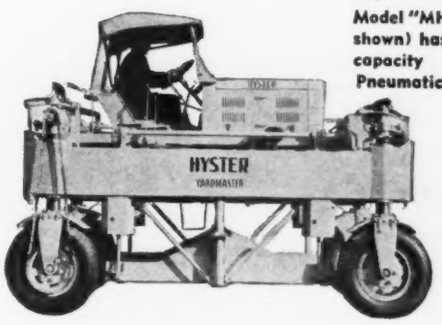
Hyster "40"
4000 lb. capacity
Pneumatic tires



Hyster "75"
7500 lb. capacity
Hyster "150" (not shown) has 15,000 lb. capacity
Pneumatic tires



Hyster Karry Krane
10,000 lb. capacity
Pneumatic tires
Mobile crane truck with adjustable boom



Hyster Straddle Truck "M"
12,000 lb. capacity
Model "MH" (not shown) has 30,000 lb. capacity
Pneumatic tires

HYSTER COMPANY

2922 N. E. CLACKAMAS ST., PORTLAND 8, OREGON
1822 NORTH ADAMS STREET, PEORIA 1, ILLINOIS

HYSTER

Branch Offices:

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WORLD'S LARGEST MANUFACTURER OF PNEUMATIC TIRE LIFT TRUCKS AND STRADDLE TRUCKS

Stop Black Yarn and Rotting Roll Covers

with

TRADE MARK REGISTERED

NON-FLUID OIL

IN U.S. PAT. OFFICE & FOREIGN COUNTRIES

Oils that leak from roll necks and spread out on faces of top rolls blacken yarn and also rot roll covers. Losses from spoiled yarn plus the expense for recovering rolls—cut deeply into profits.

7 out of 10 mills avoid such losses by using NON-FLUID OIL which stays in roll necks and lubricates dependably instead of leaking or creeping. NON-FLUID OIL protects covers from oil rot, prevents blackened yarn and reduces lubricant and labor cost by outlasting oil 3 to 5 times.

Write for Instructive Bulletins and free testing samples.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 MADISON AVENUE NEW YORK 17, N. Y.

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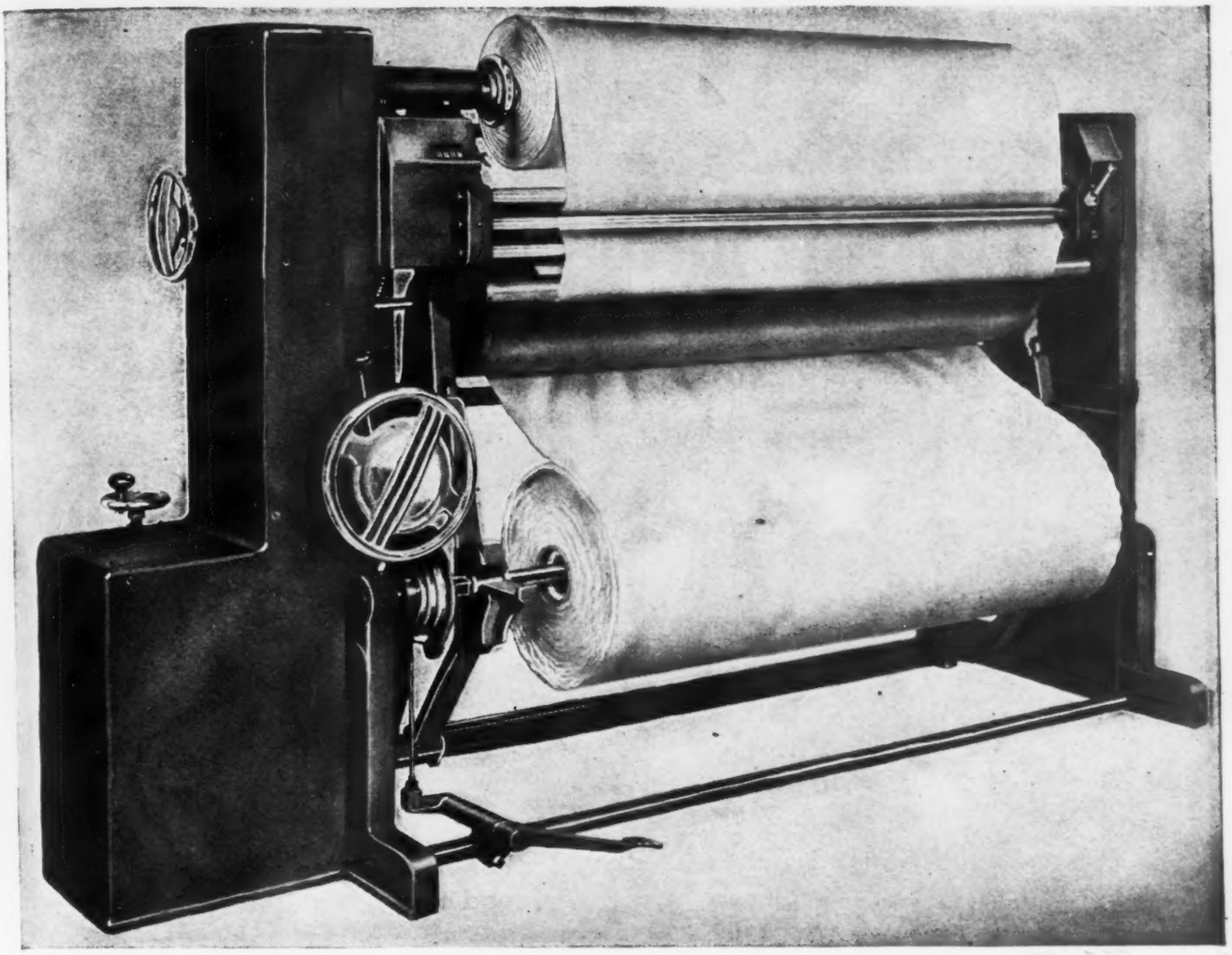
FIFTY YEARS OF SERVICE TO INDUSTRY
50
NON-FLUID OIL
TRADE MARK
1896 - 1946

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our exclusive manufacture.



TIME TESTED—NOW EVEN BETTER

This Van Vlaanderen Tubing Machine has done excellent work through the war years. Now it has been improved to process up to 250 yards a minute and to take larger diameter rolls on tubes.

Operation of the machine is through mechanical controls within easy reach of the operator. Cloth speed is constant and measuring is accurate and dependable. Ball bearings are used throughout. Motor and I-3 variable speed drive. Lubricated parts are sealed in oil.

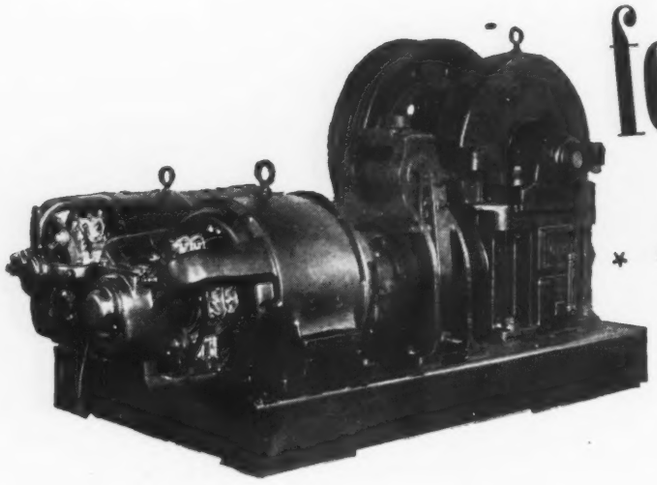
Write for descriptive leaflet

VAN VLAANDEREN
MACHINE COMPANY

370 STRAIGHT ST., PATERSON 3, NEW JERSEY

World's largest manufacturer of machines for processing modern fabrics

Otis Maintenance for Otis Elevators



Otis Maintenance is a service under which the owners of Otis elevators place the entire care of their elevator equipment in the hands of the manufacturer.

This service by Otis for Otis elevators cannot be duplicated at any price. There are three reasons for this:

Men — a field and headquarters organization combining the knowledge and experience of trained elevator men with that of those who designed and built the equipment.

Materials — including genuine Otis parts, special Otis tools, and over a million dollars worth of emergency replacement equipment.

Maintenance Methods — the result of periodic inspections, lubrication, adjustment and replacement of parts, supported by scientific study and research to make elevators run better and last longer . . . a clinic that, *in one day*, gains experience that would take the average owner over fifty years to accumulate.

Under Otis Maintenance the world's greatest store of elevator knowledge and experience is combined with the facilities of the manufacturer of more than half of the world's elevator equipment.

You can obtain this service for your elevators at a flat monthly rate. Complete details are available through local Otis Elevator Company offices.

ELEVATOR COMPANY

OFFICES IN ALL PRINCIPAL CITIES

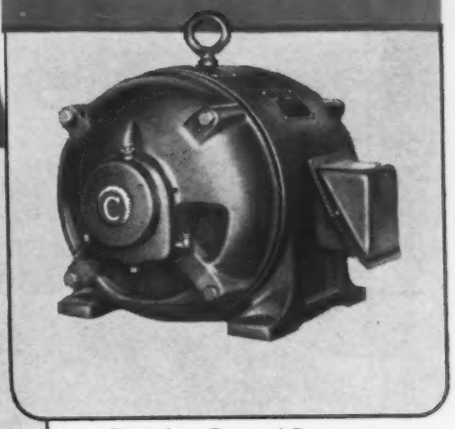
Get Protection

Against Atmospheric Hazards With

One of CENTURY'S 4 Kinds of Motor Frames . . . . . .

Adequate protection against practically any destructive atmosphere is assured by one of the four kinds of construction available on Century modern industrial motors. On your job, the right protection for the vital parts of Century motors assures long life and trouble-free performance.

1 Century Form J, open rated, general purpose motors will give the protection needed on most ordinary installations. Because the upper half of the motor frame is closed, falling chips or small solids and dripping liquids cannot fall into the motor.



Form J — General Purpose Application

2 Century Splash Proof motors give you protection against splashing or dripping water—are ideal where plants and machinery are washed down with a hose, or for outdoor installations.

Splash Proof Protection

3 Century Totally Enclosed Fan Cooled motors keep out dust, dirt, grit, abrasives, oil, mist or fog because the vital parts of the motor are isolated from the outside atmosphere.

TEFC—Protects Against Destructive Dust, Grit, Powdered Materials

In addition, special Century insulation may be provided for installations where the atmosphere is heavily charged with corrosive or otherwise acid, alkali, or other destructive fumes.

These protective Century motor features may be combined with a wide range of motor types and sizes to provide a perfect combination for nearly any application. Century motors are built in sizes from 1/20 to 600 horsepower.

Specify Century Motors on all your electrically powered equipment. Engineered to the functional characteristics of the machines they drive to assure top performance—Century Motors are a vital factor in producing a better product at a lower cost.

4 Century Explosion Proof motors are used where the atmosphere is charged with explosive materials, such as gases, or grain dusts held in suspension.

Explosion Proof

458

Century C MOTORS

CENTURY ELECTRIC CO.

1806 Pine St. St. Louis 3, Mo.

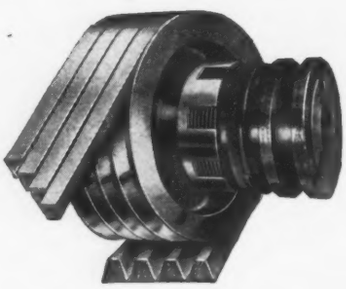
Offices and Stock Points in Principal Cities

MAXITORQ FLOATING DISC MAXITORQ FLOATING DISC

NO HEATING IN NEUTRAL WITH MAXITORQ FLOATING DISC CLUTCHES

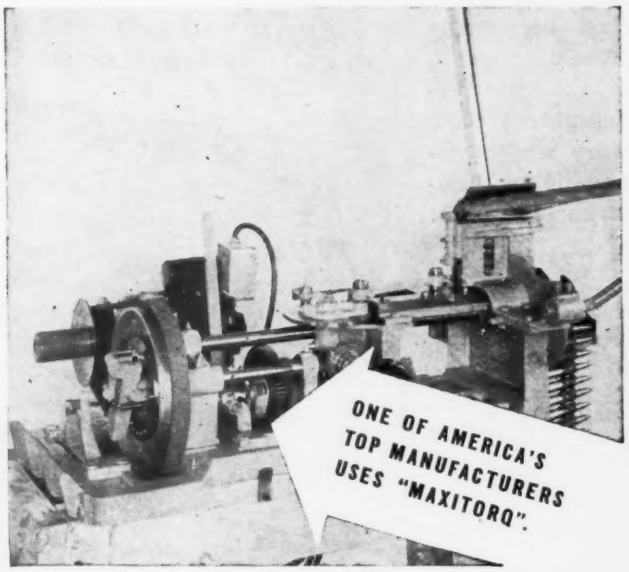
SINGLE CLUTCH

Maxitorqs are available in single and double types, wet or dry and in capacities from ¼ to 15 H.P. at 100 R.P.M. Larger Capacities to order.



PULLEY TYPE CLUTCH

Pulley type and Cut-off Coupling types are also made . . . ¼ to 15 H.P. at 100 R.P.M. Ask our Engineers for recommendations to serve specific power transmission problems.



Pictured above is a packaging machine built by one of the country's leading manufacturers. They have found that the Maxitorq floating disc clutch fills all their requirements for positive and smooth power transmission . . . with the dependability of the machine itself. The "Who's Who" list of machine manufacturers using Maxitorq grows steadily. Our clutch specifications below show you why.

ASSEMBLE, ADJUST, TAKE-APART . . . *without* TOOLS

The simplicity of the Maxitorq is very evident when you take it apart (without tools). You will note the fine machining of each component . . . the ease and smoothness of fitting them together . . . the accuracy of adjustment.

Patented Maxitorq Separator Springs between each disc "float" them apart . . . prevent drag and abrasion in neutral . . . with no heating.

Engagement and disengagement are positive; controlled with light pressure. Construction of the entire unit is clean-cut, compact.

Carlyle Johnson has made clutches *only*, for over 40 years. The Maxitorq tops them all. It has all the characteristics to provide the finest, surest performance demanded by the most critical of machine tool and machinery designers.

Specify Maxitorq for sure-action power transmission.

WRITE FOR CATALOG 462

THE CARLYLE JOHNSON MACHINE COMPANY
MANCHESTER CONNECTICUT

TRADE MAXITORQ MARK

MAXITORQ FLOATING DISC MAXITORQ FLOATING DISC MAXITORQ FLOATING DISC MAXITORQ FLOATING DISC MAXITORQ FLOATING DISC MAXITORQ

cellitons

for dyeing and printing
of cellulose acetate

outstanding in
- quality
- money value
- completeness of range

GENERAL DYESTUFF CORPORATION
435 HUDSON STREET, NEW YORK 14, NEW YORK
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Widely Adaptable New Acid Valve

FEATURES SPLIT BODY AND REMOVABLE SEAT

Two Valves in One: Simply reverse the position of the body sections and the new "United" Type "R" Valve is changed from a "Y" pattern to an Angle pattern.

Removable Seat and Plug-Disc in Any Alloy: Not only the plug disc but the seat itself is removable for easy, economical maintenance. Or seat and plug of any desired alloy can be installed.

NATIONAL LEAD'S VERSATILE UNITED TYPE "R" VALVE SLICES INVENTORY AND MAINTENANCE COST

This ingenious new "many purpose" valve offers a combination of advantages unobtainable with valves where body and seat are cast as an integral unit.

For one thing, it can be installed either as a "Y" or Angle pattern, simply by reversing the position of the body section, as shown in the illustration at the right. This enables you to reduce your supply stock by standardizing on one valve with two uses.

Again, since the seat is removable, as well as the plug disc, both can be replaced easily at nominal cost, thereby effecting worthwhile economies in maintenance.

Moreover, seat and plug disc can be fabricated in any alloy you specify . . . "custom-made" to withstand abrasive or other particularly hard-to-handle fluids. For more normal applications the valve can be furnished three standard ways: 1. With lead plug disc and stem integral; 2. With removable lead plug disc; 3. With removable rubber plug disc.

It is fabricated not only in hard lead but also in lead lined 125 lb. cast iron and 150 lb. cast steel types.

Further information regarding the "United" Type "R" Split-Body Flanged Valves will be furnished gladly upon request.

* * *

Remember, National Lead also manufactures acid valves of many other types, both lead lined and hard lead, in all required sizes and styles . . . gate, angle, check, diaphragm and free-flow "Y" types . . . as well as special valves designed to specification.

* * *

No matter what your needs — from lead pipe . . . to lead lined, covered or lead bonded equipment . . . to complete acid recovery plants . . . National Lead is ready to supply you.

Consult our Technical Staff and benefit by years of experience with thousands of lead installations in every field handling corrosive solutions and gases.

IF ACID HANDLING IS YOUR PROBLEM . . .

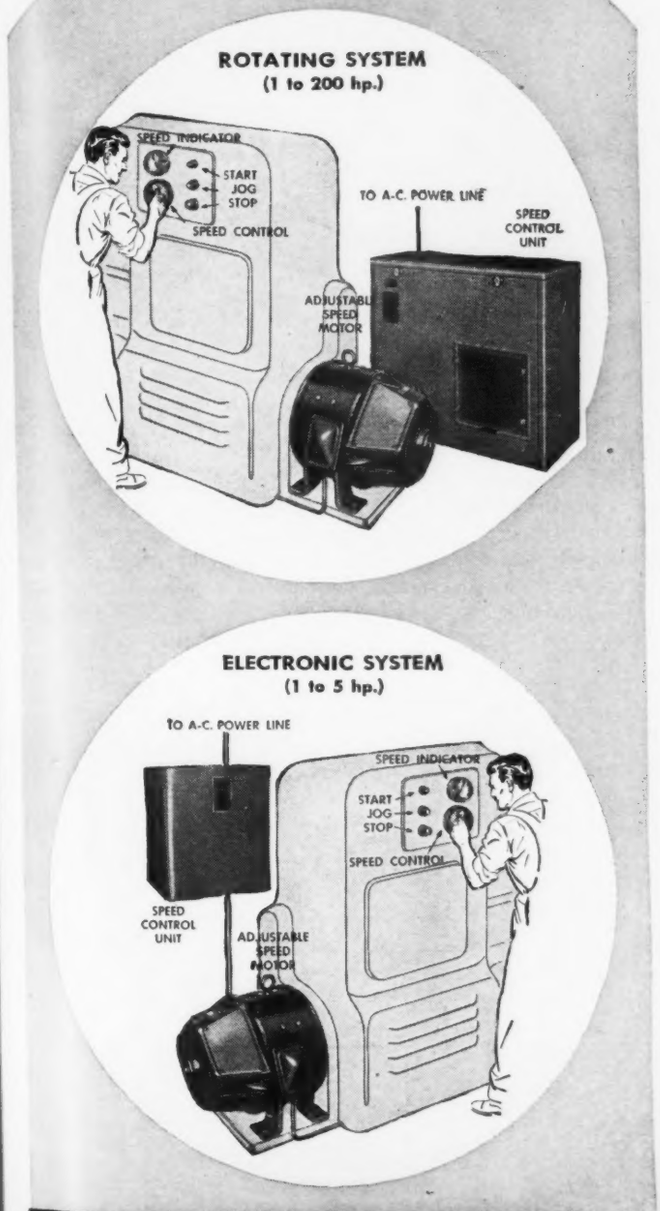
Go "National" for Lead

NATIONAL LEAD COMPANY
111 Broadway, New York 6, N. Y.
Offices and Plants in Principal Cities and Canada

Why pay more than you need

RELIANCE V★S DRIVE

to get D-c. Power where you want it?



SAVE $25 to $60 per Kilowatt of installed D-c. capacity with RELIANCE V★S DRIVE

If in your plant—as in so many others—there is a need for supplying D-c. power for adjustable-speed operations, you are likely to find that *spot conversion of A-c. power* with the Reliance V★S Drive is the perfect answer. This is true for two reasons.

FIRST—V★S DRIVE saves you from $25 to $60 per kilowatt as compared to the cost of bringing in and applying D-c. power from some central source. These figures are based on a wide variety of applications.

SECOND—V★S DRIVE gives you unlimited flexibility of machine operation and application. This includes both automatic and manual control with smooth starting, stopping and reversing. Also, an infinite range of stepless speed changes, automatically maintained tension and many other specialized advantages.

Before installing D-c. power lines, learn what you can save with Reliance V★S Drive, which operates from your regular A-c. circuits. And see what V★S, with all-electric control, can do in improving quality and quantity of output, while reducing installation, operating and maintenance costs. Write today for the up-to-date story on spot conversion of A-c to D-c power.

We'll be looking for you at the
20TH EXPOSITION OF CHEMICAL INDUSTRIES
Grand Central Palace • New York • Week of February 25th

RELIANCE ELECTRIC & ENGINEERING CO.
1086 Ivanhoe Road • Cleveland 10, Ohio
Birmingham • Boston • Buffalo • Chicago • Cincinnati • Denver • Detroit • Gary
Greenville • Houston • Kalamazoo • Kansas City • Knoxville • Los Angeles
Milwaukee • Minneapolis • New Orleans • New York • Philadelphia • Pittsburgh
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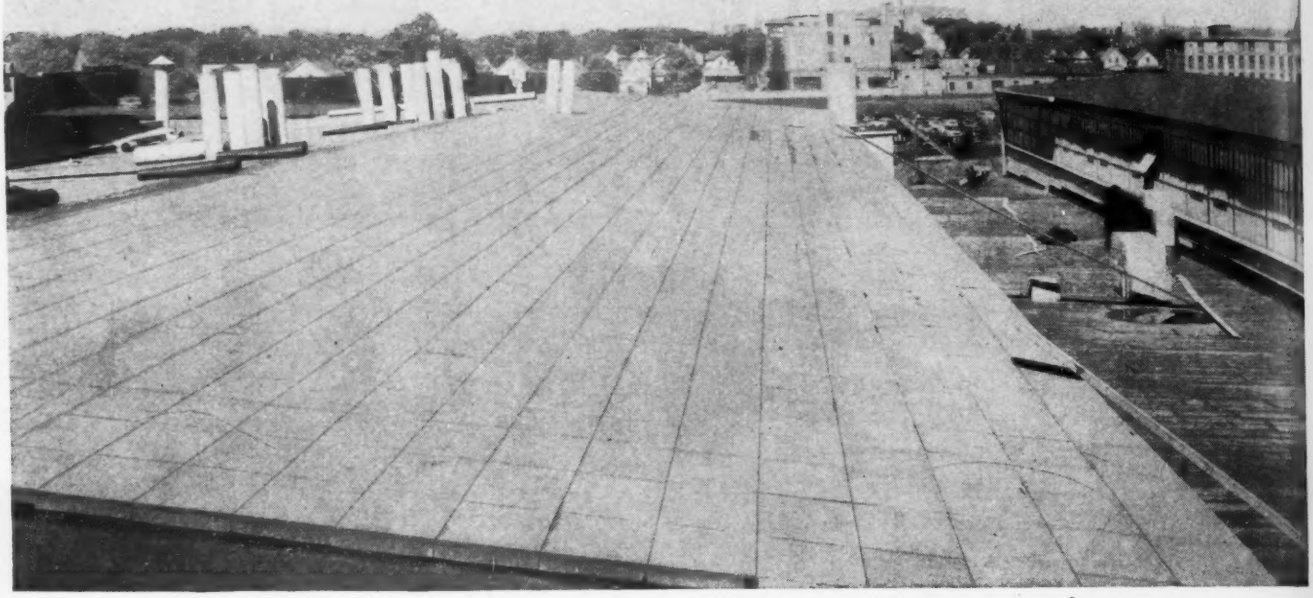
RELIANCE A-C D-C MOTORS

"Motor-Drive is More Than Power"

For Roofs of Modern Plants . . .

PC FOAMGLAS Insulation



The roof of this building is being insulated with PC Foamglas preparatory to air-conditioning. This unique insulating material helps to control temperature and humidity, to lessen condensation—*permanently.*

This picture shows how PC Foamglas Insulation is applied and how roofing is built up. PC Foamglas is laid on the concrete deck in hot pitch or asphalt. Then, in turn, the required number of plies of roofing felt are laid with pitch or asphalt, and, if required, gravel finish is applied. All sorts of flat deck roofs, on all sorts of buildings all over the country, have been insulated — for good — with PC Foamglas.

Providing a firm, level base for roofing felt, PC Foamglas, the permanent insulation, can be cut quickly to fit around openings and obstructions right on the job, with ordinary tools. When you are figuring a roof insulation job, figure on the most efficient, the most economical material—PC Foamglas.

ONE of the problems which face builders of new, modern plants is the selection of an efficient insulating material for large roof areas. It has been solved effectively, economically . . . permanently . . . by specifying PC Foamglas Insulation.

Made of air-filled glass cells, PC Foamglas does not warp, shrink, swell, check or rot. It is impervious to moisture, vapor, and the fumes of most acids, elements that cause other materials to lose insulating efficiency.

So PC Foamglas will help to maintain pre-determined temperature and humidity levels in top floor workrooms, winter and summer, throughout the life of the building. Heat losses are reduced, saving fuel, easing the load on heating and air-conditioning plants. Improved humidity control protects precision machinery and goods in processes by reducing surface condensation.

We have published a booklet which contains charts and tables, detailed specifications and clear directions for installing PC Foamglas Insulation. We shall be glad to send you a free copy if you will just fill in and mail the convenient coupon. Pittsburgh Corning Corporation, Room 115, 632 Duquesne Way, Pittsburgh 22, Pa.

FIRST COST IS LAST COST WITH PC FOAMGLAS

for these reasons . . .

Permanent Insulation	Fireproof	Economical
Moistureproof	Verminproof	Strong, Rigid Structure
Vaporproof	Light Weight	Quick, Easy Installation

· *Also makers of PC Glass Blocks* ·

PC FOAMGLAS *Waterproof Fireproof* **INSULATION**

T. M. REG. U. S. PAT. OFF.

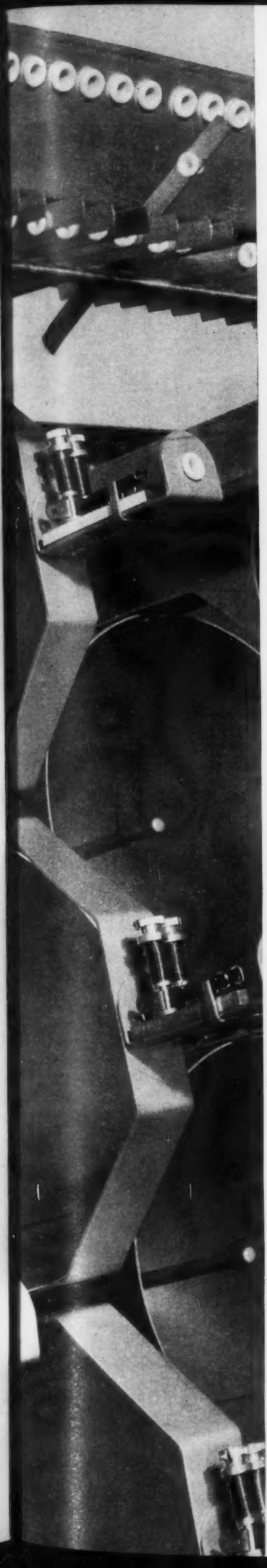
Pittsburgh Corning Corporation
Room 115, 632 Duquesne Way
Pittsburgh 22, Pa.

Please send me your booklet entitled, "PC Foamglas Insulation for Roofs." I incur no obligation.

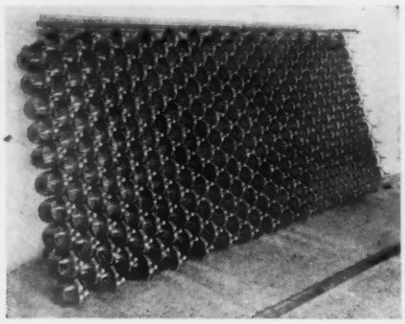
Name_____

Address_____

City_____ State_____



A Trail Blazer



Danica

HONEYCOMB HIGHSPEED BALOON CREEL

- Increases production of the warper and quality of the warp.
- Unlimited warping speeds for cones, spools and tubes without causing snares.
- Adjustable twin ring tensions for each end permits warping any yarn, cotton, silk, rayons and wool, from the finest to the coarsest.
- Positive tension on each end with electrically controlled drop switches assures against lost ends with instantaneous stop motion.
- Aluminum construction saves floor load and floor space per spindle. Overall dimensions for 300 spindle creel, approx. 13 x 4 feet. No moving parts to maintain.
- Many other completely new and revolutionary features are incorporated in the Danica Honeycomb Balloon Creel to make it the outstanding creeling development of our times.

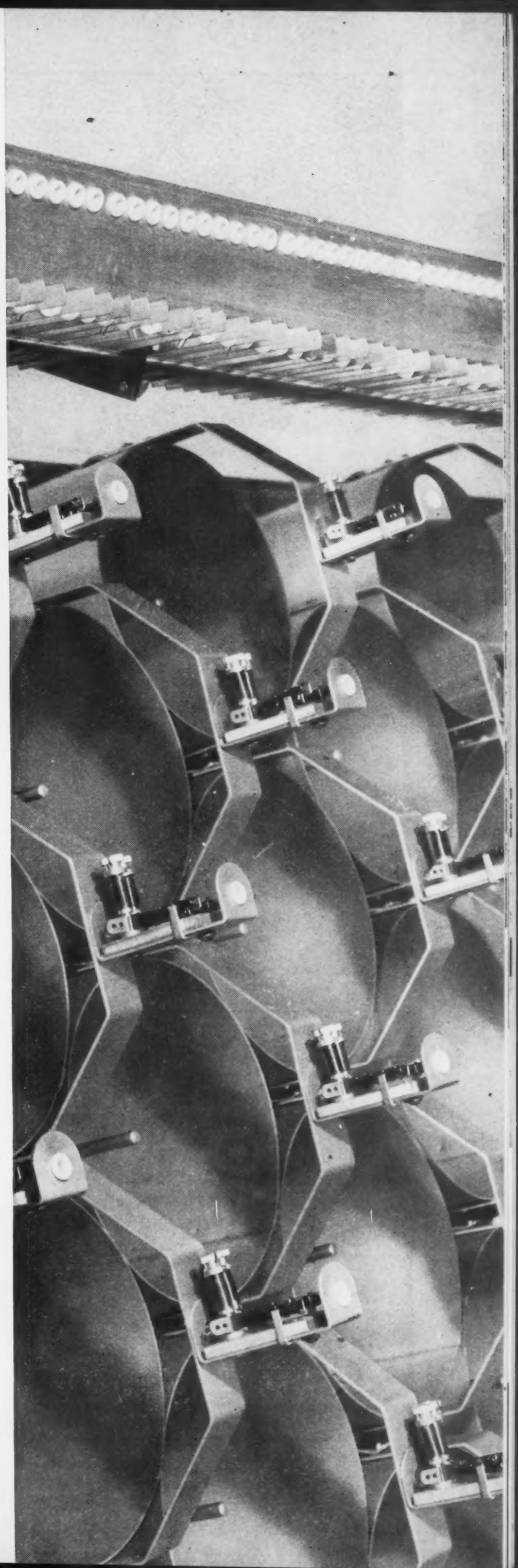
Send for our literature or see it by appointment at our Laboratories

DANICA LABORATORIES

Textile Division

Paterson 1, N. J.

14-20 Paterson Street



BETTER GET WETSIT FOR INSTANT WETTING OUT

• WETSIT wets out faster—at lower concentrations—than any other agent we know. Gives instant, *complete* penetration in all types of textile fibres. Because WETSIT is a concentrated liquid, it's economical, easy to handle and measure, does away with the inconvenience of handling dusty, sneezy powders.

Equally efficient in neutral, acid or alkaline conditions, WETSIT is not affected by calcium and magnesium salts of hard water. It disperses and suspends lime curds formed by soap and makes rinsing easy. WETSIT can save you time and money in every stage of textile processing, in every operation where you want complete penetration—*instantly!*

BETTER BECAUSE...

- Faster
- Low Cost
- Completely soluble
- More efficient
- No waste

WOLF BRAND PRODUCTS

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How UP-TO-DATE are you on ALUMINUM?

Sheet for Slashers

Steam-, Fume-Resisting!

Are you planning to remodel your slashers? Whether you embark on a rebuilding job, or buy new equipment, it will pay you to specify slasher hoods, exhaust equipment and ventilating ducts made of Reynolds Aluminum Alloy Sheet.

Lightweight, tough, this highly corrosion-resistant sheet means easier installation, longer life, lower maintenance cost. No protective paint coat is necessary. Your fabrics will not get stained from drips, for moisture condensation is not discolored by aluminum. Our engineers will gladly assist you in working out your problems.

Consider Aluminum . . . Consult Reynolds. Offices in principal cities. Phone nearest office. Or write Reynolds Metals Company, Aluminum Textile Sales Division, 2535 S. Third Street, Louisville 1, Kentucky.

We'll be seeing you at the Textile Show—Section Nos. 433, 434, 435 Annex

QUICK FACTS FOR QUICK READING

- Aluminum alloys developed by Reynolds possess unit strengths greater than many structural steels.
- Section for section, Reynolds Aluminum alloys weigh only ⅓ as much as steel.
- Highly corrosion-resistant, they withstand the high humidity common to many textile processes.
- Permanent dimensional stability reduces vibration, makes higher speeds possible.
- Fabricating ease, combined with low material costs, insures low over-all cost.

REYNOLDS METALS

REYNOLDS ALUMINUM

The Great New Source of

INGOT • SHEET • SHAPES • WIRE • ROD • BAR • TUBING • PARTS • FORGINGS • CASTINGS • FOIL • POWDER

FOR LOW POWER CONSUMPTION

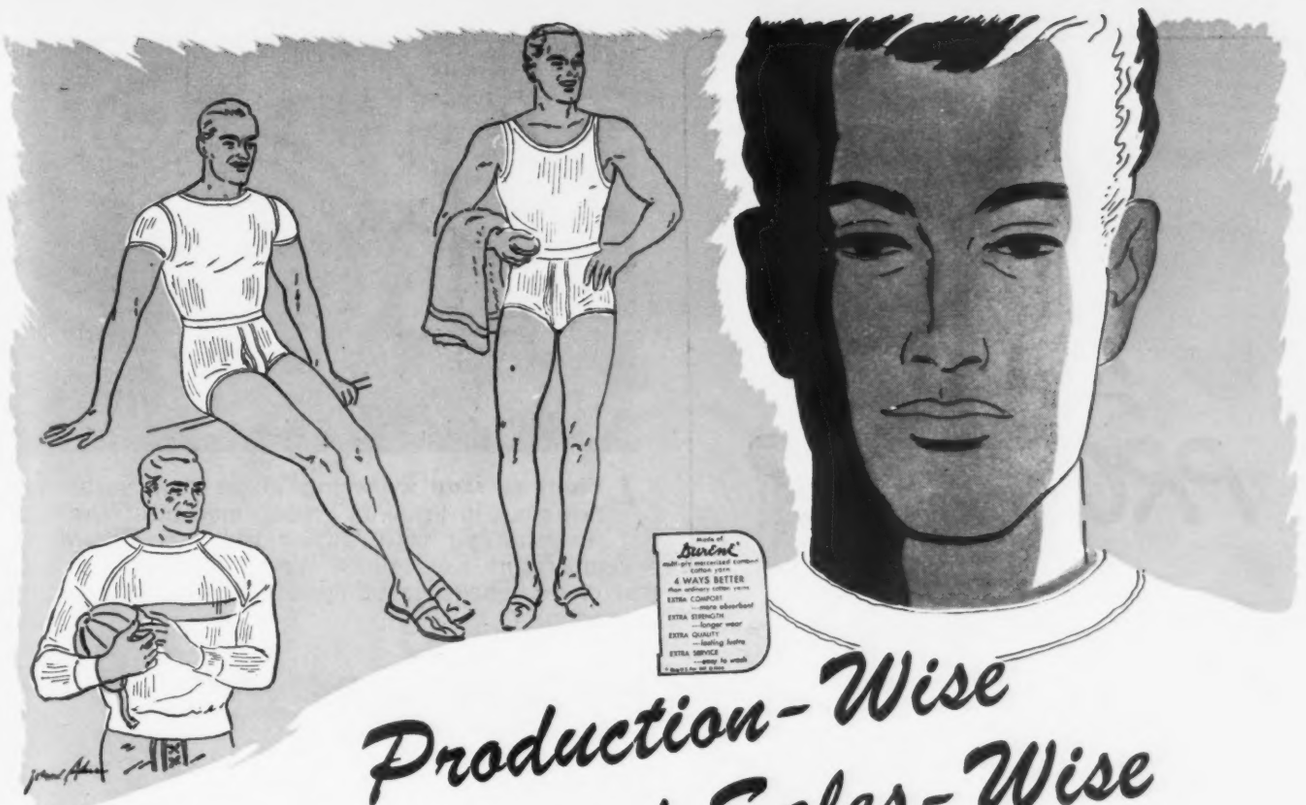
LILY WHITE OILS ON SPINDLES

REDUCTION of power costs results from use of the right spindle oils, properly applied. SINCLAIR LILY WHITE OILS are finely finished lubricants possessing high stability characteristics to resist deterioration . . . increased body and deposits . . . during service. Use of the proper grade assures *continuous* low power consumption because there is no increased friction drag to cause power loss.

BESIDES contributing to low power consumption SINCLAIR LILY WHITE OILS help reduce maintenance cost by promoting long bolster life. Their worth was proven in many plants during the war years when mills were operating at top capacity and replacement parts were difficult to obtain. LILY WHITES come in viscosities to suit all operating speeds. Our lubrication counsel is available in solution of your problems.

SINCLAIR TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N. Y.



Production-Wise and Sales-Wise

STANDARD DURENE in hosiery and knitwear pays

Smoother, faster production, greater comfort, wear and beauty with STANDARD DURENE... a fine quality cotton staple... spun, twisted and mercerized in our own plants under rigid controls. Plan now to profit production-wise and sales-wise with STANDARD DURENE.

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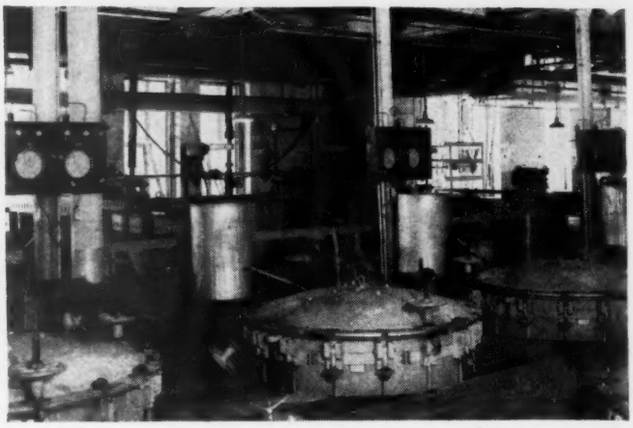
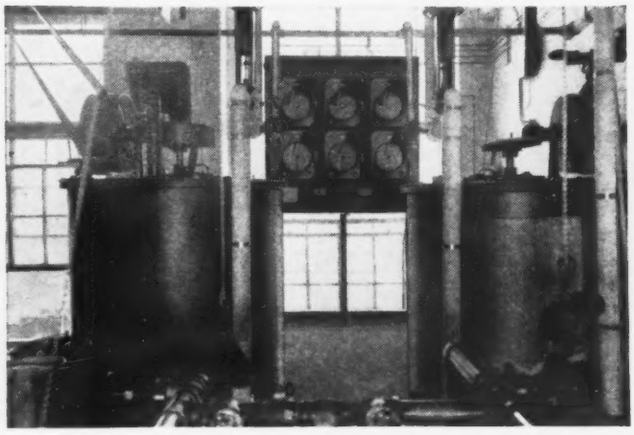
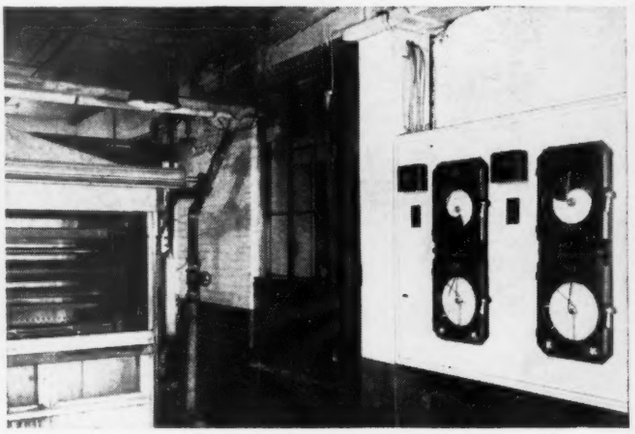
WHAT'S YOUR PROBLEM?



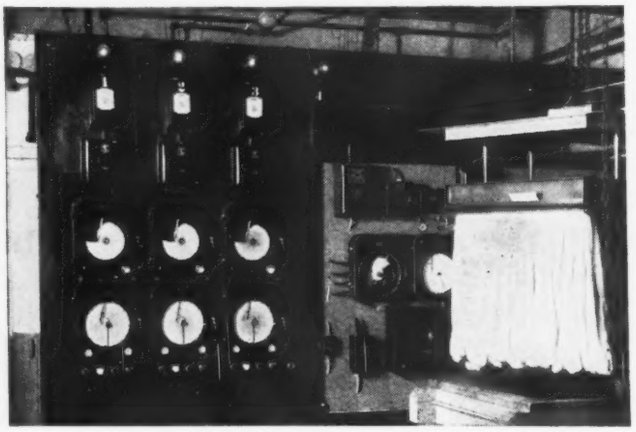
1 Want to stop worrying about temperature of raw stock in Franklin Process machines? Control it *automatically* with Taylor Fulscope Recording Temperature Controllers. We installed these years ago for a famous New England mill, and they're still going strong.



2 Want to cook size without overflowing or overboiling? Put in Taylor Fulscope *Time Schedule* Controllers. Once you have the ideal cooking schedule, you can reproduce it every time, with automatic control of time and temperature. All the operator has to do is load the kettle and push the button.



3 Want to save labor for more important jobs than watching temperatures on piece dye machines? Let Taylor Fulscope Time Schedule Controllers do it *automatically*. You'll find temperatures controlled to a degree not previously thought possible, and timing equally precise.



4 Want the last word in automatic control of yarn dyeing? This picture shows the latest Taylor setup contrasted with previous installation. One cam handles all schedules. Agitator motor always starts in reverse direction so hanks of yarn are unkinked immediately.

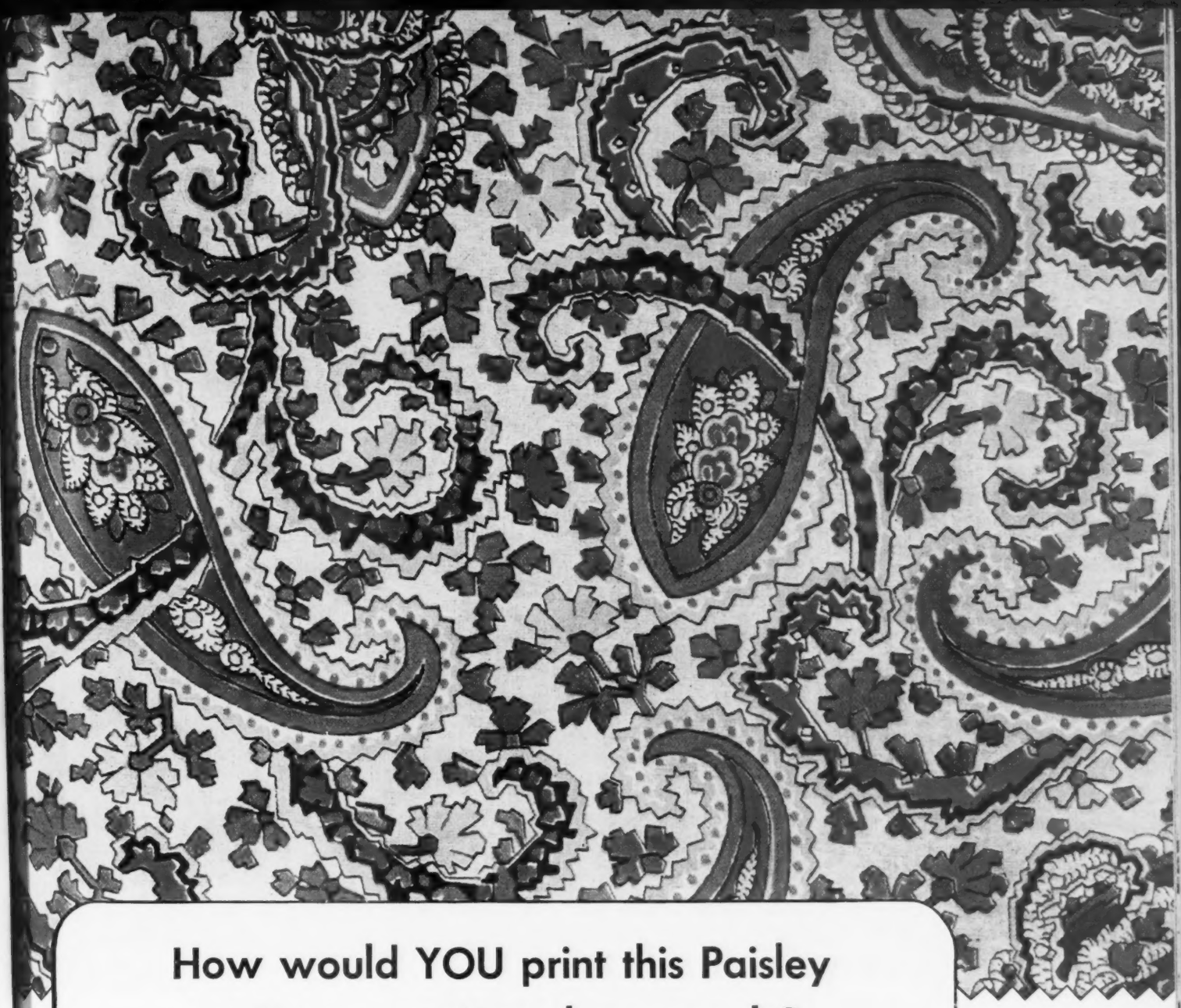
Taylor Instruments

MEAN

ACCURACY FIRST

IN HOME AND INDUSTRY

5 Whatever your problem—the tougher the better—we'd like the chance to work out a Taylor Automatic Control system for you. Send for your Taylor Field Engineer or write Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*



How would YOU print this Paisley pattern on cotton dress goods?

The Pontiac Finishing Plant, of Fruit Of The Loom, Inc., decided that the best and most economical method was to use a combination of Aridye* Pigment Colors and Rapidogen Dyes.

The formulas were as follows:

GOLD . . . 16 parts Aridye Yellow FYG; 1 part Aridye Orange FO cut 1:12 with Aridye Clear.

GREEN . . . 4 parts Aridye Yellow FYG, 1 part Aridye Blue FC2G; 1 part Aridye Green FJB cut 1:12.

AQUA . . . 4 parts Aridye Blue FC2G; 1 part Aridye Green FJB cut 1:24.

NAVY . . . 5 ozs. per gal. Rapidogen Navy blend in starch paste.

RED . . . 6 ozs. per gal. Rapidogen Red mixture.

After printing, the fabric was dried, acid aged, rinsed, soaped, rinsed, and dried. By using Aridye Pigment Colors in combination with Rapidogens, Pontiac ran no risk of a pre-coupling action and consequent destruction of the colors where they touch one another. Use of Aridye Pigment Colors for the aqua and the green reduced color costs. Results: an exceptionally clean print, an attractive color combination in the close fit required on Paisley patterns, and comparatively low color costs.

This Paisley pattern is typical of many in which Aridye Pigment Colors can be used either alone or in conjunction with various classes of dyestuffs to achieve color combinations or other effects difficult or impractical to obtain any other way.

When you have a printing or dyeing problem, why not discuss it with an Aridye technical service man? Write Aridye Corporation—Pioneers in Pigment Colors for Textiles—Fair Lawn, N. J.

*Reg. U. S. Pat. Off.

CHECK THESE 8 ADVANTAGES

Sharpness of Mark · Exceptional Fastness to Sunlight
Uniformity of Shade · Fastness to Washing · Bright Colors
Economy · Ease of Application · No Impairment of Hand

Aridye
Pigment colors

ARIDYE CORPORATION · A SUBSIDIARY OF INTERCHEMICAL CORPORATION · FAIRLAWN, N. J. · ROCK HILLS, S. C. · PROVIDENCE, R. I.

Why You Are in No Immediate Danger of THIS!

Unfortunately, loom-production isn't simply a matter of loading a bunch of slot-machines (or warehouses) with all the different types of C&K Looms, so that all those who want them can step up and fill all their needs at the same time . . . *right now!* And here are some very good reasons:

The Loom Works is in the process of training many new men to high personal productivity. That isn't done in a day, *by anyone.*

And the Loom Works, for all its size and diversification of manufacturing, still has to depend on outside suppliers for certain basic essentials like bearings, motors, and other products. And those suppliers, in turn, are dependent on conditions outside *their* control.

These simple, inescapable facts are often overlooked by all of us, in the urgency and impatience caused by conditions of unremitting daily pressure which grows greater rather than less.

But, nevertheless, be assured of this: Loom production, week by week and month by month, *is steadily stepping up.* And as new men, methods and materials fit more and more smoothly into the groove, the increasing momentum of output will bring your own delivery date up *fast.* In fact, you can have every confidence that the thousands of people at C&K are working day and night toward filling *your* order at the earliest possible moment.

Crompton & Knowles Loom Works

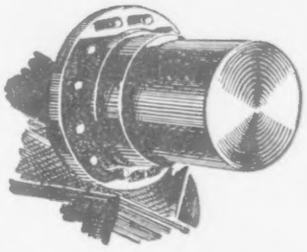
WORCESTER 1, MASSACHUSETTS, U. S. A.
PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA.
Crompton & Knowles Jacquard & Supply Co.
Pawtucket, R. I.

between Today's Knowledge...
and Tomorrow's Looms

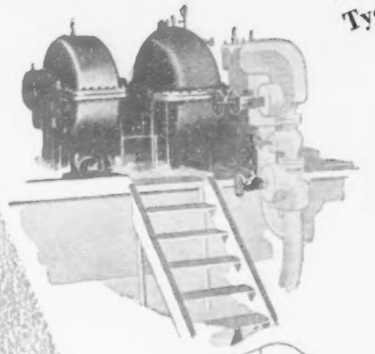
FOR EVERY SERVICE CONDITION...

You can count on

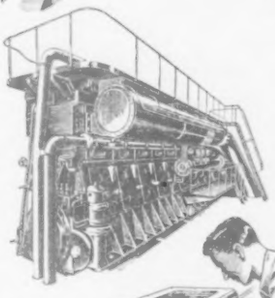
TYCOL "ENGINEERED LUBRICATION"



EXTREME PRESSURE GREASE—"Never a single bearing failure since we changed to Tycol E.P. Grease."

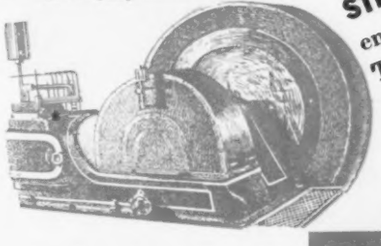


TURBINE OIL—"70,000 hours continuous operation . . . oil still in excellent condition."



DIESEL OIL—"No more trouble with Sticking Valves . . . costly delays and overhauls eliminated . . . engines giving better service . . ."

NO-RUST-OLS—Prevent rust formations on machines—small parts prior to assembly—and finished products. Usable at all temperatures by spraying, brushing, swabing or dipping.



STEAM CYLINDER OIL—"We saved 33 1/3% engine lubrication costs when we changed to Tycol Cylinder Oil."

TYCOL

• **Results such as these are typical where Tycol lubricants are specified. Call, write or wire your nearest Tide Water Associated office for full details about the lubricant best suited to your needs.**

Lubrication—"engineered to fit the job"

BOSTON • PHILADELPHIA • PITTSBURGH • CHARLOTTE, N. C.

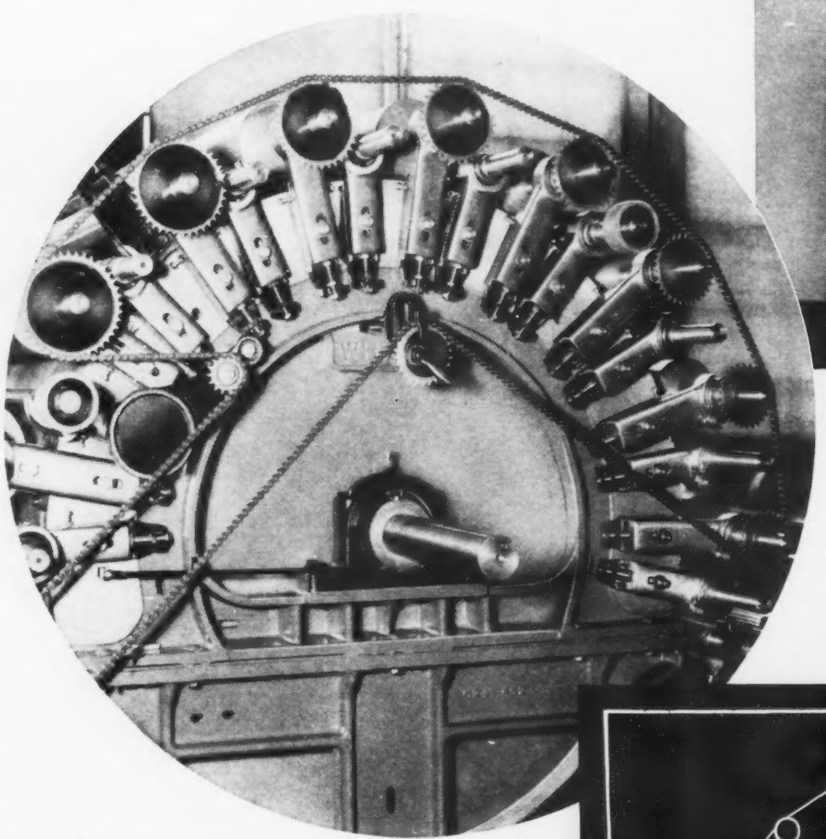
TIDE WATER ASSOCIATED OIL COMPANY

17 BATTERY PLACE · NEW YORK 4, N. Y.

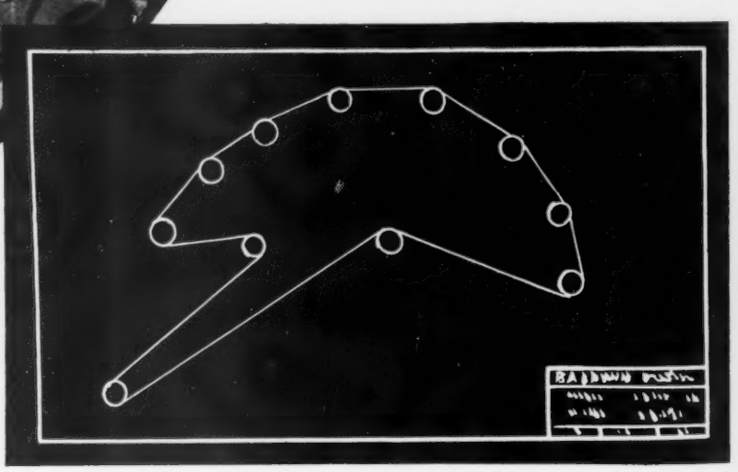
DO YOU KNOW ROLLER CHAIN . . .

is right for driving multiple shafts?

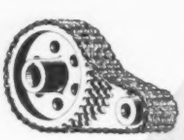
① **THE FLEXIBILITY** and rolling contact of roller chains offer the best means of positively turning multiple shafts from a common drive.



② **EIGHT SEPARATE SHAFTS** of this textile card are driven by a single Baldwin-Rex roller chain. Each shaft turns in perfect timing with the next, for roller chains are positive in action . . . do not slip to cause faulty timing. They are easily installed and do not rely on tension for effective operations.



③ **AS SHOWN** in the photograph and diagram, the rolling action of roller chain eliminates friction and permits it to operate positively where design limitations dictate a minimum number of sprocket teeth contacting the chain. And another advantage: notice how the drive flexes in two directions.



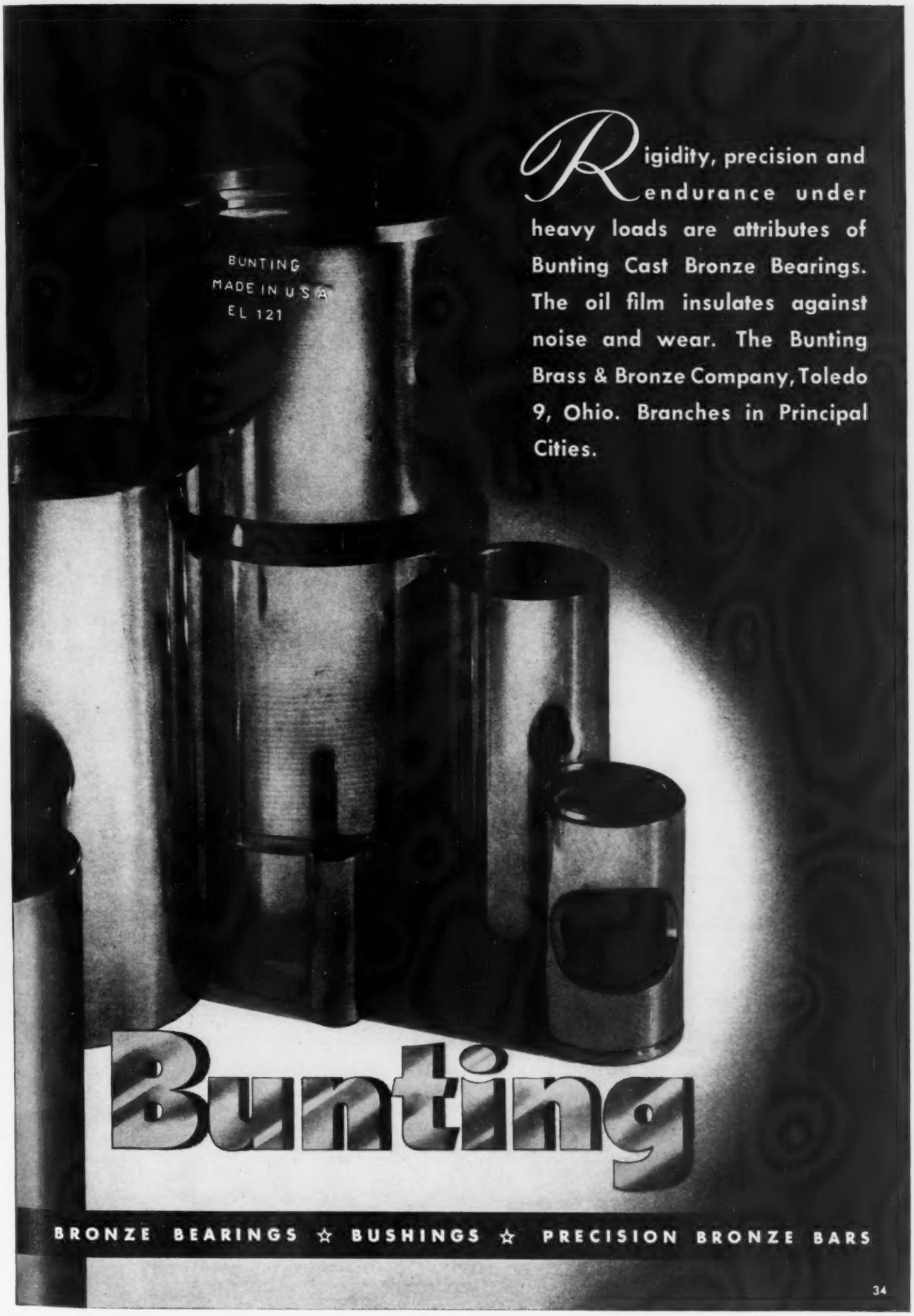
BALDWIN·REX

ROLLER CHAINS

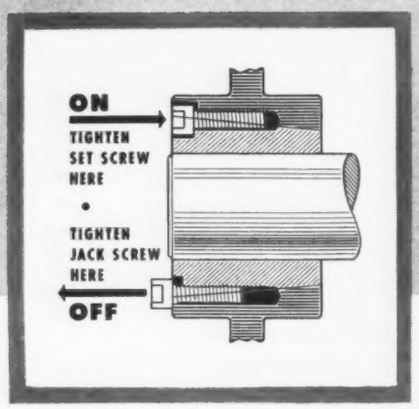
Write for information and competent assistance on your specific drive problems or for catalogs on Baldwin-Rex roller chains.

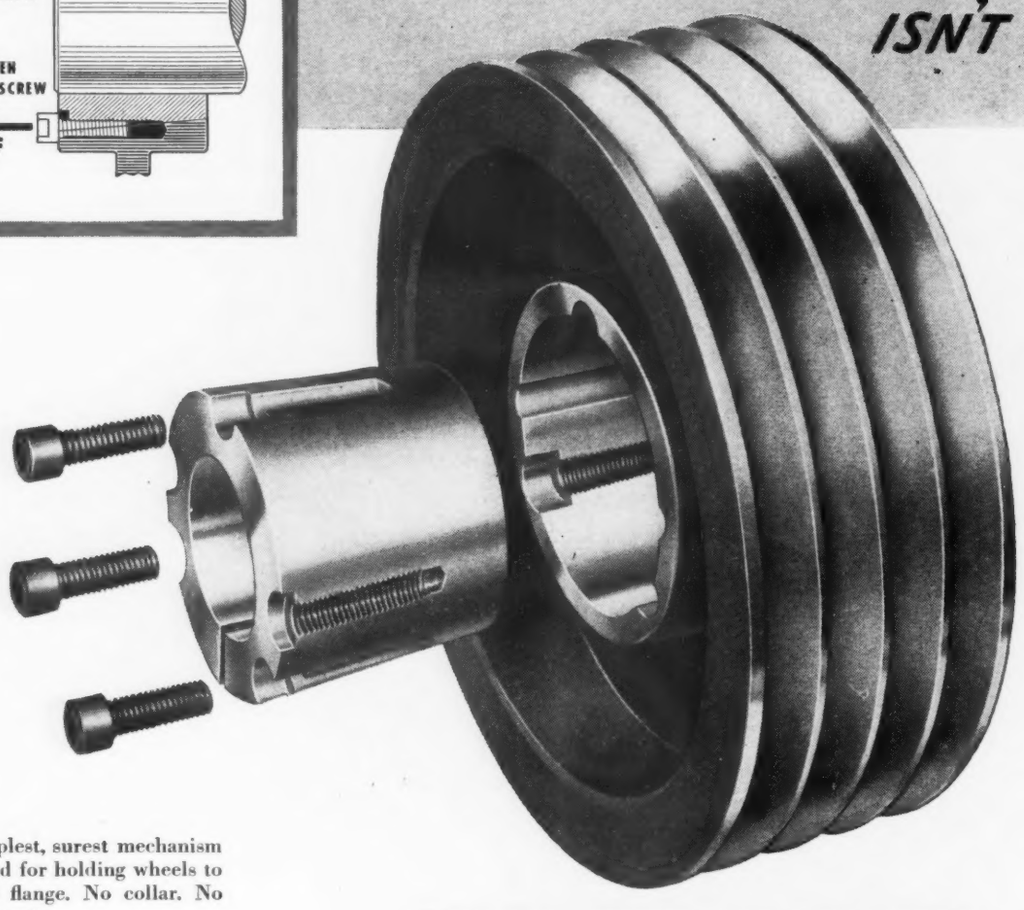
BALDWIN-DUCKWORTH DIVISION OF CHAIN BELT COMPANY

346 Plainfield Street, Springfield 2, Massachusetts


BUNTING
MADE IN U.S.A.
EL 121
Rigidity, precision and endurance under heavy loads are attributes of Bunting Cast Bronze Bearings. The oil film insulates against noise and wear. The Bunting Brass & Bronze Company, Toledo 9, Ohio. Branches in Principal Cities.
Bunting
BRONZE BEARINGS ☆ BUSHINGS ☆ PRECISION BRONZE BARS
34

Simple, ISN'T IT?





- The simplest, surest mechanism ever devised for holding wheels to shafts! No flange. No collar. No protruding parts.
- The Taperlock Sheave mounts as a complete unit. Slip it on, line it up and tighten *while sighting.* It's in place on the first try!
- The bushing is wedged into the sheave by means of set screws—with a firmness equivalent to a shrunk-on fit—whether the shaft is standard or normally undersize.
- The Taperlock runs *true.* The bushing extends the entire length of the hub; it provides a *full* bearing surface.
- Close mountings are made possible. No flange nor collar nor other device is required at either end of the sheave hub.
- The Taperlock "unlocks" with less effort than any other sheave—due to its special taper.
- Taperlock Sheaves will be stocked by Dodge Transmissioneers in principal cities—and will be available in ALL stock sizes.

New TAPER-LOCK *Sheave*

PATENT APPLIED FOR

Easy on—easy off—locks fast to the shaft! ALL the advantages you've ever dreamed about in a sheave are *here*—in the simplest, quickest acting mechanism ever developed for the purpose!

For full details call your local Dodge Transmissioneer. You'll find his name listed under "Power Transmission Equipment" in your classified telephone directory. Or write

DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

DODGE
MISHAWAKA

SIGN OF THE DODGE TRANSMISSIONEER
There are 257 Dodge factory graduate Transmissioneers, located in principal cities, to show you NEW and BETTER ways of transmitting power. See your local classified telephone directory.

Look to Teca for new achievements in summer '46 suitings. This resilient *crimped* acetate staple is stepping up spun rayon blends . . . improving their hand and shape-holding qualities . . . making them cooler, easy to clean . . . minimizing shrinkage by its controlling action on other fibers. The more Teca in a blend — famous-name suitings contain sixty percent — the more you can count on these characteristics to build satisfaction for spun rayon tropicals.

For further information about Teca consult A. M. Tenney Associates, 10 East 40th Street, New York 16, sales representatives for Tennessee Eastman Corporation, Kingsport, Tennessee, subsidiary of the Eastman Kodak Co.

***EASTMAN *CRIMPED* ACETATE RAYON**

for MAXIMUM CAPACITY IN MINIMUM SPACE

Interchangeable

WITH SINGLE-ROW BALL BEARINGS

NORMA-HOFFMANN

PRECISION ROLLER BEARINGS

NORMA-HOFFMANN BEARINGS CORP'N.,

STAMFORD, CONN., U. S. A. • *Founded in 1911.*

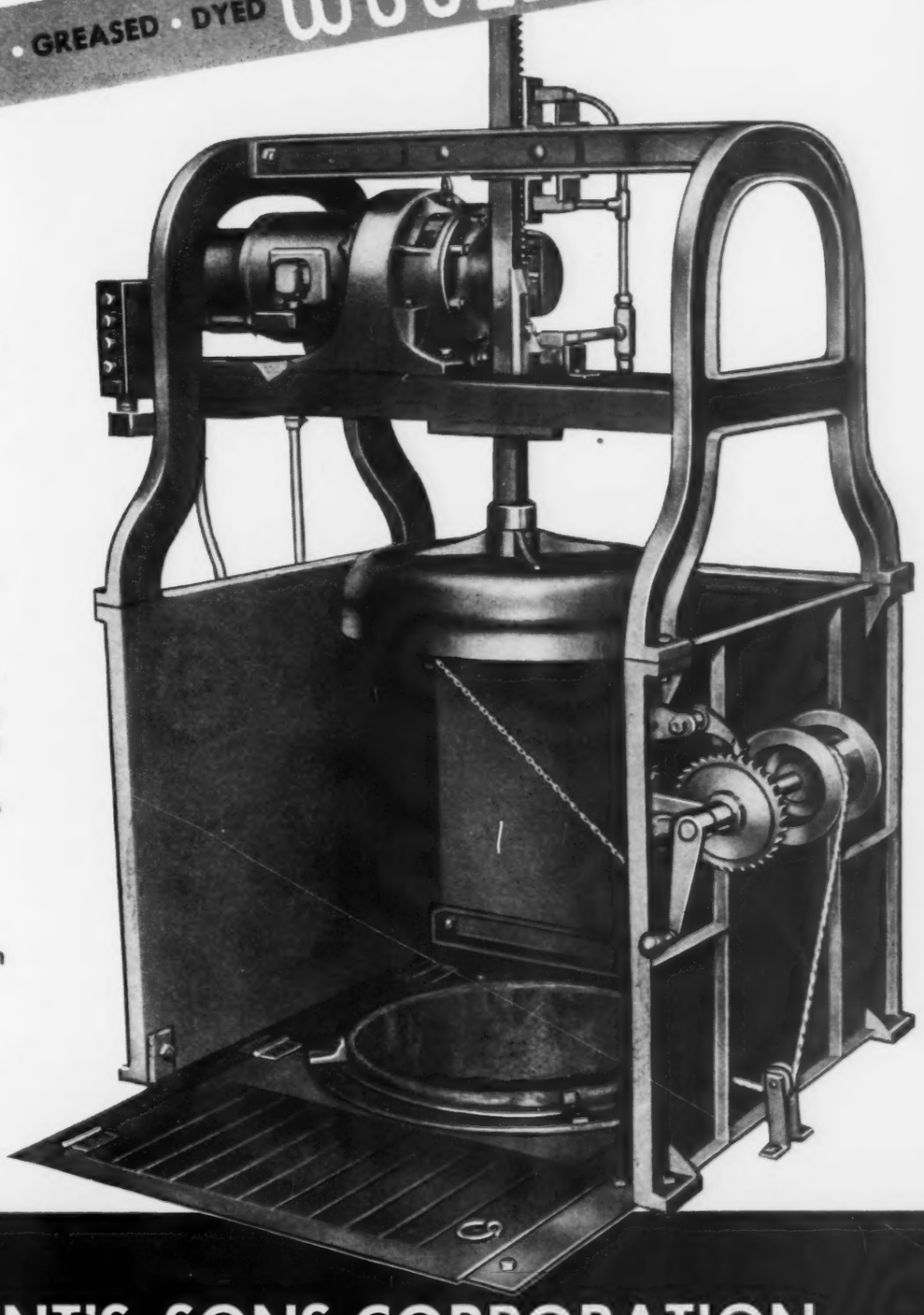
Write for the Catalog. Let our engineers work with you.

Their solid cylindrical rollers provide maximum contact area, giving larger load and shock-absorbing capacity than any other single-row bearing of like dimensions. Thus, when NORMA-HOFFMANN PRECISION ROLLER BEARINGS are used in place of ball bearings, a greater factor of safety is provided, together with added life, particularly under vibration and overload. PRECISION qualities in workmanship and materials adapt them alike for both low and high speeds.

FAST ONE-MAN OPERATION

SARGENT'S Automatic BAGGING MACHINE

FOR SCOURED · PULLED · GREASED · DYED WOOLS NOILS · WASTE



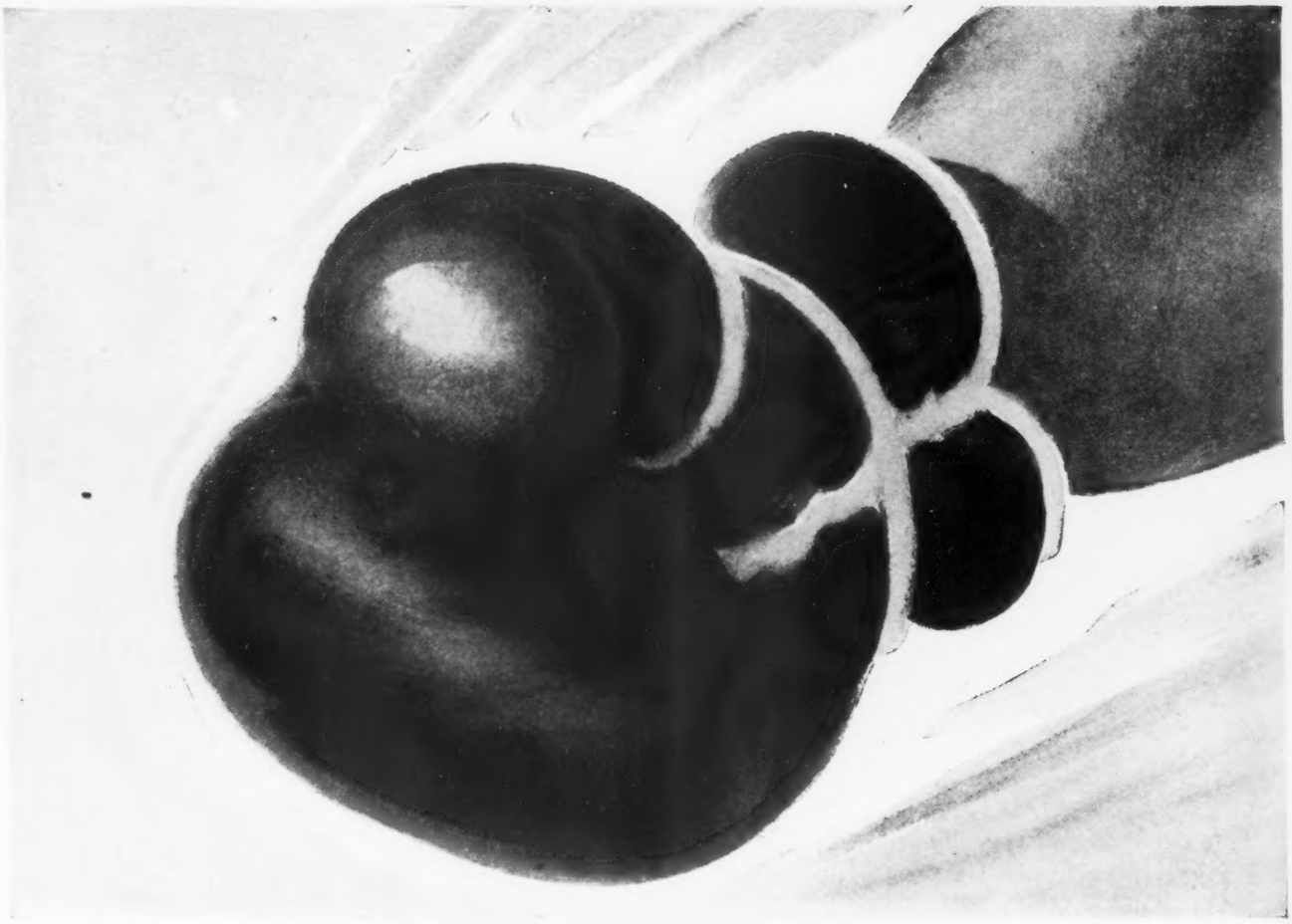
Compact, *fully automatic, of proven efficiency, the* SARGENT BAGGING MACHINE *offers these advantages to the mill and warehouse owner:*

- One-man operation throughout
- Finger-tip control at all times
- Insures uniform bulk and weight of all bags packed
- Handles up to 10 bags per hour—100 to 150 lbs. per bag depending upon the wool or material bagged
- The Sargent bagging process is safe as well as rapid
- Requires little floor space
- Constructed to require minimum maintenance

Write us for complete details

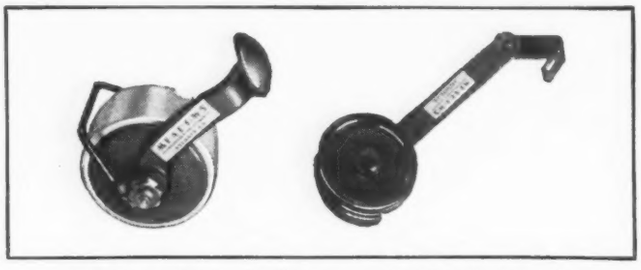
C. G. SARGENT'S SONS CORPORATION

GRANITEVILLE, MASSACHUSETTS, U.S.A.



A SUNDAY PUNCH
FOR "MONDAY MORNING" PULLEY TROUBLES

WET weather, dry weather, dirt, lint and the natural perversity of plain bearings used to gang up over weekends to put frames out of whack. Tapes slipped off sticky pulleys and bands broke off when the frames were started up. Counterweighting the tape tension pulleys only piled extra loads on overworked spindle and cylinder bearings; wasted power. Slack yarn piled up and twist-uniformity went out the window.



Meadows makes band pulleys, tape pulleys for spinning and twisting, and pulleys for worsted roving and spinning.

But these Monday morning pulley troubles took a "Sunday punch" when textile men caught on to an idea that puts Monday morning back into the work week . . . the idea of the Meadows Ball Bearing Tension Pulleys – they stop the tapes from sliding off and the bands from breaking off on Monday mornings.

The Fafnir Ball Bearings in these tape and band tension pulleys, made by Meadows Manufacturing Company of Atlanta, eliminate so much friction that tension can be lessened, power saved, and the life of tapes greatly extended. Spindle speeds are stepped up and made more uniform. And Fafnir's Balanced Design . . . large balls and deep races . . . enables these pulleys to handle all loads and speeds. Meadows Tension Pulleys are serving more than 2 million spindles and many mills have reported five and six years of trouble-free performance.

Monday and every day in the week Fafnir Ball Bearings, specially designed for textile equipment, are showing the industry that there's more profit in less friction. The Fafnir Bearing Company, New Britain, Conn.

MOST COMPLETE LINE IN AMERICA

FAFNIR BALL BEARINGS

"Full many a gem of purest ray serene" . . . Like the discovery of a flawless pearl, the making of a fabric that is wondrously sheer is a never-to-be-forgotten thrill. The high quality of full-fashioned stocking fabrics made with TMW Needles means greater profit for you. Keep your Knitting Machines young and effective with TMW Needles . . . *And remember: Regular Reneedling Pays! Let us put your needle bars in shape for faster, more accurate, more profitable knitting.*

TEXTILE MACHINE WORKS • READING, PA.

THE WAR DECORATIONS OF
TEXTILE MACHINE WORKS
Bur. of Ord. Flag and Navy "E"
July 25, 1941
One Star All-Navy "E" Burgee
January 25, 1942
Two Star Army-Navy "E"
July 25, 1942
Three Star Army-Navy "E"
January 25, 1943
Four Star Army-Navy "E"
January 11, 1944
Five Star Army-Navy "E"
July 9, 1945

"Milk the cow which is near."

THEOCRITUS

Until production schedules will permit prompt delivery of the new high-precision READING Full-Fashioned Knitting Machine, our Engineers will do their utmost to help you keep your present equipment at highest efficiency. Let us tell you about our complete reconditioning service and what it means in terms of better fabrics and higher profits.

TEXTILE MACHINE WORKS • READING, PA.

LET THE NEW PALLETIER RAISE YOUR LOADS AND Lower Your Handling Costs

WHAT is the fastest, easiest, most economical method of unloading and storing material? Time study men have found that the more you can handle in a single operation, the lower will be your cost. For *peak* handling at *top* speed, the new Crescent Electric PALLETIER is the answer.

After nearly eight years of research—with an eye on your needs—the Crescent PALLETIER is ready to lift your loads and lower your handling costs. Built for fast, safe, easy handling, it will pick-up, store and unload packaged material in a jiffy. Silent, quick, nimble as a cat, it will purr through your warehouse, slip into narrow areas, speed up inventories and reduce damage to merchandise caused by excessive handling. You'll be able to use more storage space, too. The standard PALLETIER will negotiate a 7-foot car door and can store material 108" above the floor. With forks inverted, it can store 132½" above the floor.

The new Crescent Electric PALLETIER has been designed for dependable and efficient service. Protection against forced acceleration is safeguarded by full magnetic controls. Foot-operated electro-mechanical brakes are mounted on each driving wheel. Emergency braking is provided by direct-acting mechanical wheel brakes from the same foot pedal or from the operator's seat. Exceptional stability in handling heavy loads is further increased by the location of the trouble-free tilting cylinder.

Easy access to all mechanisms adds to the long procession of PALLETIER advantages that make it the last word in low cost materials handling. Send for complete details and specifications today.

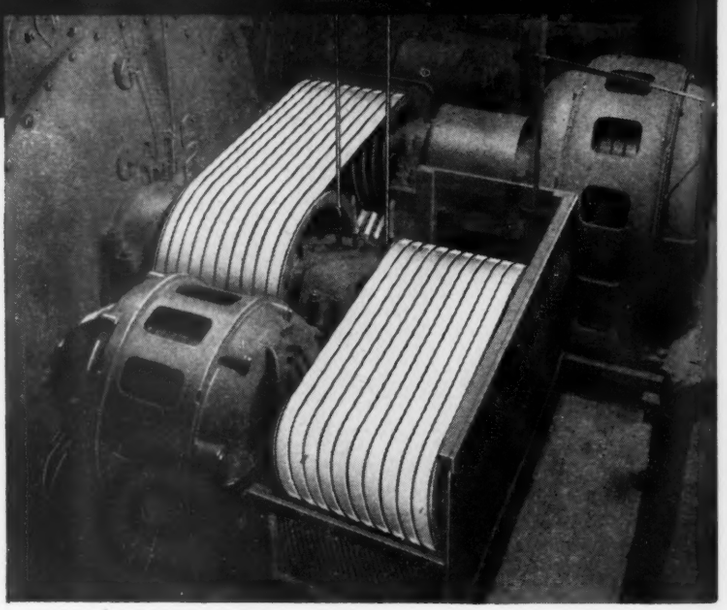
CRESCENT TRUCK CO., 1145 Willow St., Lebanon, Pa.

Industrial Truck and Tractor Specialists Since 1917

CRESCENT *Electric* PALLETIER

It's the REASON for this Fact that's important

Your *Standard* GATES VULCO ROPES Are Today *OUT-PERFORMING* Any V-Belts Ever Built Before



Early in the war it was found that **no** V-belts then being built by **anyone** could stand the combat-service requirements of the Army's tanks, tractors, and self-propelled big guns. For this unprecedented severity of service, Gates developed and built V-belts far stronger and more durable than any V-belts ever built before—and here is why this fact is NOW important to YOU:—

HERE is the reason

Every improvement developed by Gates for these Army V-belts has also been added, day by day, to the quality of the standard Gates Vulco Ropes which have been delivered to you.

Here is one of the very few instances in which improvements developed primarily for military use were passed on immediately to you. Ordinarily, that could not be done. Gates V-belts were made an exception because it was recognized that industry needed the best possible V-belts in order to achieve the greatest possible production—and maximum production was one of the nation's vital needs.

That is why Gates has been able to pass on to you, day by day, every V-belt improvement developed for our armed forces during the war—and that is why your Standard Gates Vulco Ropes are today outperforming any V-belts ever built before!

All Gates V-Belts are Built With *The Patented* **CONCAVE SIDE**

Gates

THE MARK OF SPECIALIZED RESEARCH

THE GATES RUBBER COMPANY

Engineering Offices and Jobber Stocks in All Large Industrial Centers

462

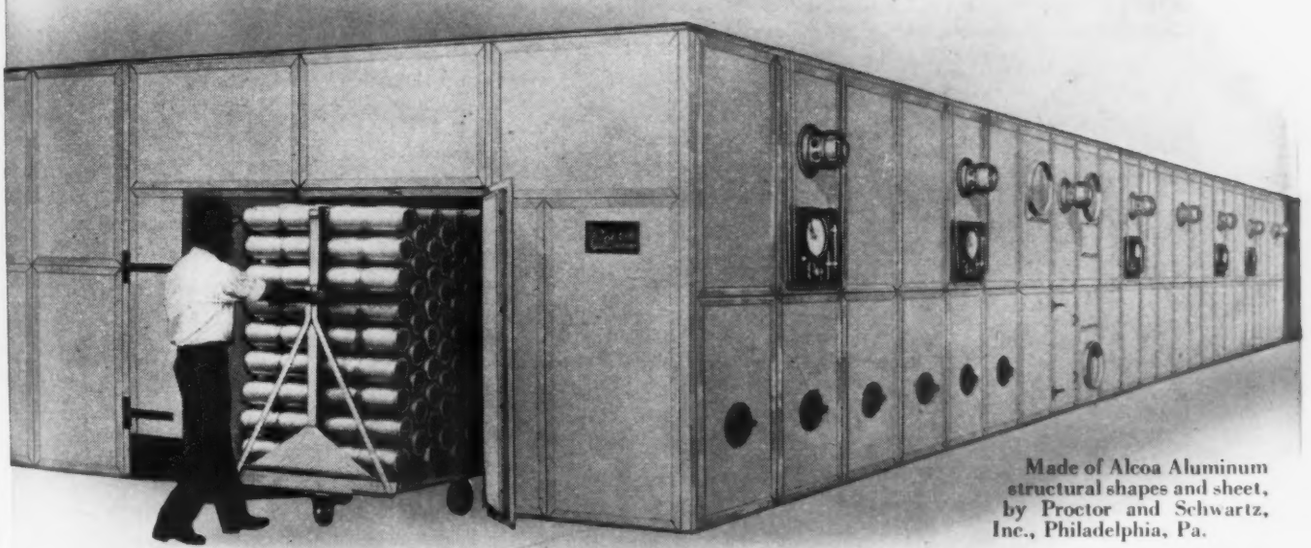
GATES VULCO ROPE DRIVES

CHICAGO 6, ILL., 549 West Washington DALLAS 2, TEXAS, 1710 N. Market Street ATLANTA 3, GA., 521-23 C & S National Bank Building
CHARLOTTE 2, N. CAROLINA, 605 West Fifth St. NEW YORK CITY 3, 215-219 Fourth Ave. DENVER 17, COLO., 999 South Broadway
GREENVILLE, S. CAROLINA, 108 W. Washington Street BIRMINGHAM 3, ALA., 801-2 Liberty National Life Bldg.

1/3 THE FLOOR LOADING...AND *no rust*

Let's analyze those two basic reasons for building a yarn dryer out of Alcoa Aluminum:

Aluminum weighs only 1/3 as much as steel. This lightness can be a big factor in the placement of large equipment to fit your production line. No need to "beef up" supporting structures.



Made of Alcoa Aluminum structural shapes and sheet, by Proctor and Schwartz, Inc., Philadelphia, Pa.

Rust? A bug-a-boo in all textile mills. If rust-laden drops of water fall on your fabrics, seconds result. If equipment parts rust out, you have high repair bills. With aluminum, neither of these things can happen. Alcoa Aluminum, highly resistant to corrosion, will not rust, requires no protective paint to prolong its service life . . . maintenance costs are held to a minimum.

The story is just as strong when talking about ventilating ducts, hoods, and other mill equipment made of Alcoa Aluminum. ALUMINUM COMPANY OF AMERICA, 1942 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA FIRST IN ALUMINUM

ALCOA ALUMINUM

JUST SAY CRANE . . .

For Everything In Piping Materials

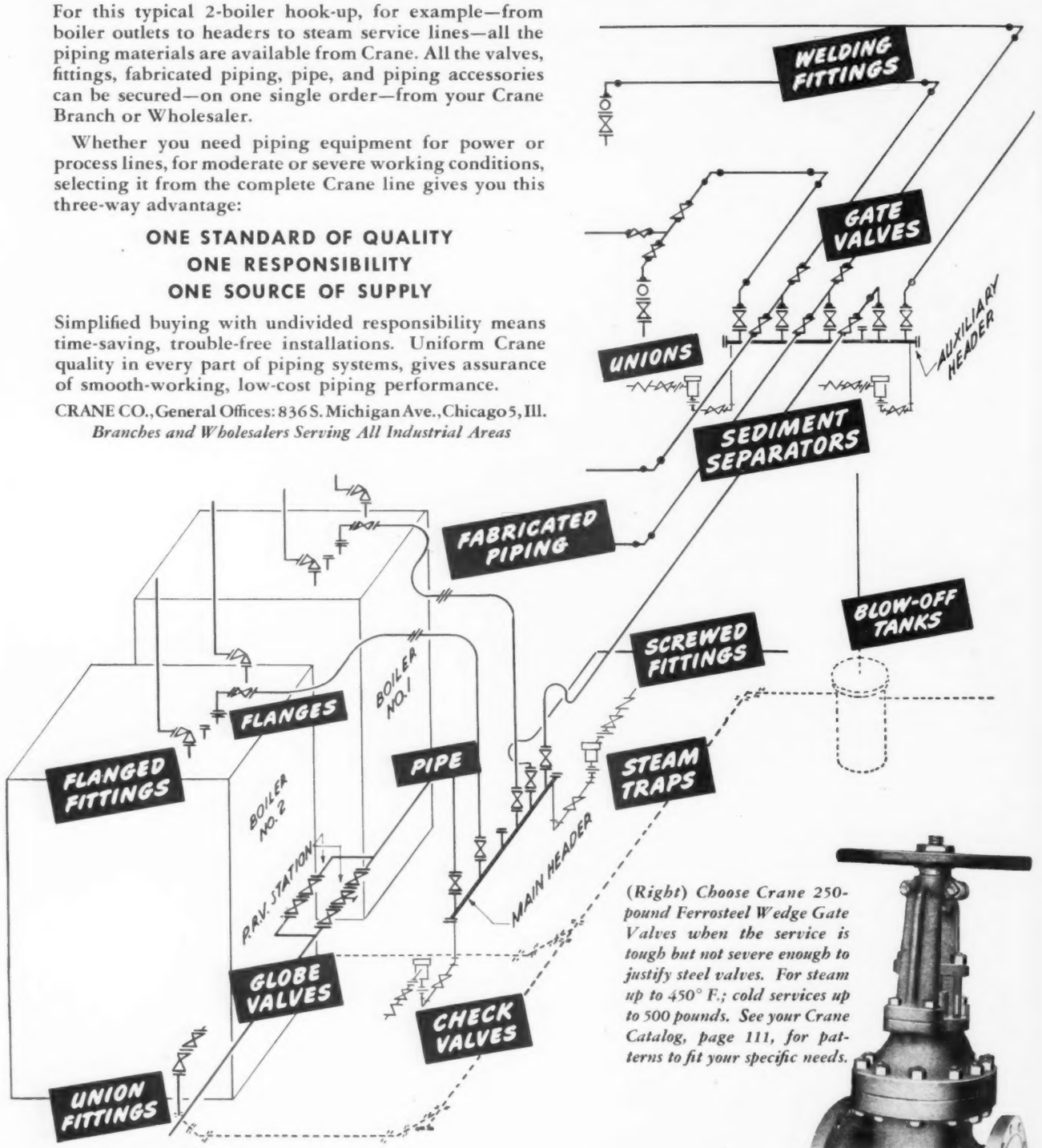
For this typical 2-boiler hook-up, for example—from boiler outlets to headers to steam service lines—all the piping materials are available from Crane. All the valves, fittings, fabricated piping, pipe, and piping accessories can be secured—on one single order—from your Crane Branch or Wholesaler.

Whether you need piping equipment for power or process lines, for moderate or severe working conditions, selecting it from the complete Crane line gives you this three-way advantage:

ONE STANDARD OF QUALITY
ONE RESPONSIBILITY
ONE SOURCE OF SUPPLY

Simplified buying with undivided responsibility means time-saving, trouble-free installations. Uniform Crane quality in every part of piping systems, gives assurance of smooth-working, low-cost piping performance.

CRANE CO., General Offices: 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas



(Right) Choose Crane 250-pound Ferrosteel Wedge Gate Valves when the service is tough but not severe enough to justify steel valves. For steam up to 450° F.; cold services up to 500 pounds. See your Crane Catalog, page 111, for patterns to fit your specific needs.

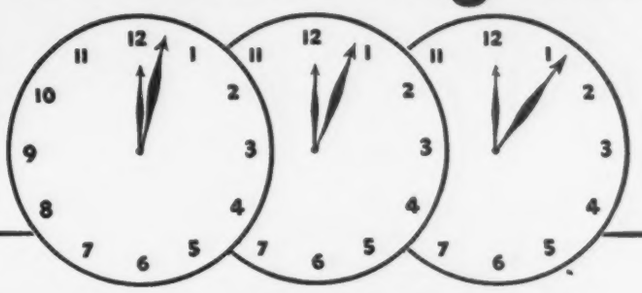
. . . EVERYTHING FROM

VALVES • FITTINGS
PIPE • PLUMBING
HEATING • PUMPS

CRANE

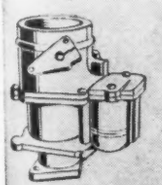
FOR EVERY PIPING SYSTEM

How to Cut Metal Cleaning Time to MINUTES



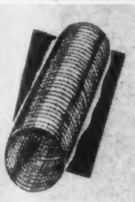
NEW, FAST-ACTION DETERGENT CLEANS FERROUS AND NON-FERROUS METALS...Easy to Handle

TYPICAL USES FOR Solvent "26"



CARBURETORS—Solvent "26" removes gum, gasolene sediment and other accumulations of dirt.

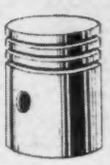
SPARK PLUGS—Solvent "26" safely cleans porcelain; helps loosen carbon deposits.



METAL PLATES AND SCREENS—Solvent "26" restores clear, clean finish to any metal surface.

DIES AND STAMPING—Solvent "26" removes drawing compounds from die-formed or stamped metal.

LABORATORY EQUIPMENT—Solvent "26" frees glass and metal tubing and their supports of gums, varnishes and other incrustations or deposits.



PISTONS—Removes lacquers, gums, resins, etc. from gas, gasolene and diesel engine pistons and rings. Also effective for cleaning all parts of dismantled motors, engines and machinery.

REMOVES:

Oil • Grease • Gums • Varnishes • Lacquers • Paints
Carbonaceous Deposits • Asphaltic Products

FROM:

Steel • Cast Iron • Aluminum • Porcelain • China
Chrome and Nickel Plate • Stone • Precious Metals
Brass • Washable Fabrics

Used throughout the war in critical industry as a superior cleaning agent, newly-developed SOLVENT "26" is now available for all industrial needs.

Offering many advantages in time, labor and cost over other present cleaning methods . . . Solvent "26" is so effective a detergent it can be used at *ordinary* room temperatures.

The fast action of Solvent "26" reduces cleaning time from hours to minutes on dismantled engine parts and all kinds of machinery. Simply dip, rub, brush or spray it on. Then flush clean with hot water.

Mail the coupon today for literature and information leading to a demonstration of this unique product in your own plant.

CITIES SERVICE OIL COMPANY
ARKANSAS FUEL OIL COMPANY

CITIES SERVICE OILS
ONCE-ALWAYS

Cities Service Oil Company
Room **650**
70 Pine Street
New York 5, N. Y.

Gentlemen: I am interested in a demonstration of Solvent "26"—at no cost or obligation.

Name.....

Title.....

Company.....

Address.....

City.....State.....

How to "Take the Heat Off" your motor maintenance problems

Excessive time and dollar losses are being avoided in every industry—by *specifying* Fiberglas* *High Safety Factor* Electrical Insulation in new motors and for rewinds.

When scores of plants were operating at full-time war production, Fiberglas Insulation Materials provided "extra" protection to overcome conditions which caused most motor burnouts and failures—heat, moisture, corrosive vapors or acids, overload and the human element. One company was operating twenty-five variable speed motors which were subjected to heavy overloads under conditions of high ambient heat, high humidity. The average life of these motors, ranging from 2½ to 10 hp. had been about four weeks. Fiberglas-Base Insulation Materials were specified—the service life of these motors was lengthened many times—and "the heat was off" the motor maintenance problem in this plant.

Why not try the remedy that has been so successful for other concerns? Get complete information about Fiberglas Electrical Insulation Materials. Write for your copy of the new catalog and ask for the names of the distributors serving your locality. *Owens-Corning Fiberglas Corporation, 1864 Nicholas Building, Toledo 1, Ohio. In Canada, Fiberglas Canada Ltd., Oshawa, Ont.*

ASK FOR FIBERGLAS—IN YOUR NEXT MOTOR—AND ON YOUR NEXT REWIND.

FIBERGLAS ELECTRICAL INSULATION MATERIALS

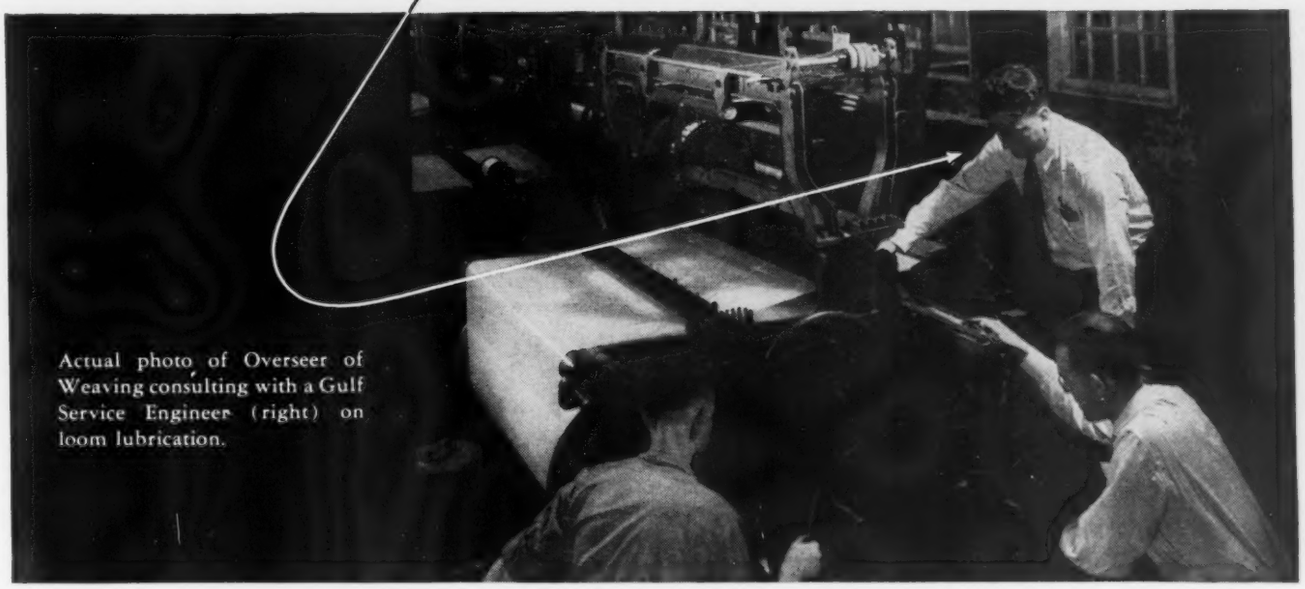
T. M. Reg. U. S. Pat. Off.

Other Fiberglas Products: Thermal and Acoustical Insulations • Dust-Stop* Air Filters • Yarns, Cloths, Mats and Basic Fibers

"With GULF QUALITY LUBRICANTS our weave shed has set an operating record that's hard to beat"

says this OVERSEER

"Our looms have produced 144 hours a week for over 3 years without needing a part replacement"



Actual photo of Overseer of Weaving consulting with a Gulf Service Engineer (right) on loom lubrication.

"WE HAVE GOOD REASON to feel that Gulf quality lubricants are the best insurance we can buy against excessive wear and high maintenance costs," says this Overseer of Weaving. "The 100 high-speed looms in our weave shed have produced efficiently 144 hours a week without needing a part replacement since they were installed over three years ago. And today we can see no evidence of wear on any loom."

Modern high-speed looms require the proper application of lubricants that provide maximum protection against excessive wear, and which resist oxidation, gumming, and "throw" to the highest degree. That's why this prominent mill, and many others, specify Gulf oils and greases in the weave shed — through actual experience they know that these quality lubricants help insure continuous production, and reduce spotting, down time, and maintenance costs.

Gulf quality lubricants are available to you through more than 1200 warehouses located in 30 states from Maine to New Mexico. Write, wire, or phone your nearest Gulf office today.

GULF INDUSTRIAL LUBRICATION

Gulf Oil Corporation • Gulf Refining Company

Gulf Building, Pittsburgh 30, Pa.

EXCEPTIONALLY FINE LUBRICANTS FOR THE TEXTILE INDUSTRY

"I remember the first time one of your men came in . . . he gave us the tip that started us using Lykopon during the first World War."

THE SERVICE THAT BUILT OUR BUSINESS CAN HELP YOURS

Our business has been built largely on the practical help we have been able to give our customers, right in their own plants, in adapting Rohm & Haas products to their needs.

Our representatives are men with technical training and practical experience in the use of industrial chemicals. Call in a member of our textile chemicals department when you need assistance in choosing or using . . .

Fine Chemicals For Fine Quality Textiles

MANY a year has passed since mill men first learned about LYKOPON from Rohm and Haas representatives.

Today textile people don't need to be told about LYKOPON. They know that the product which first made vat dyeing in the United States independent of foreign suppliers remains the leader in the field . . . outstanding among sodium hydrosulfites for its purity, strength and uniformity.

Talking with Rohm and Haas representatives is *still* a good way to keep abreast of things in textile chemicals . . . Let us know if you would like one of our men to call and tell you about our newer textile products. Some of these materials may be just what you need—as helpful as the industry's foremost reducing agent . . .

LYKOPON

LYKOPON *is a trade-mark Reg. U. S. Pat. Off.*

Represented in Canada by Rohm & Haas Company of Canada, Ltd., Toronto; and in South America by Cia. Rohm y Haas, S. R. L., Carlos Pellegrini 331, Buenos Aires, Argentina, and agents in principal South American cities

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Manufacturers of Chemicals for the Textile, Leather and other Industries . . . Plastics . . . Synthetic Insecticides . . . Fungicides . . . Enzymes

THE FAILURE OF "FACT-FINDING"

THE PRESIDENT has asked Congress to grant him authority to appoint fact-finding boards to deal with nationally important labor disputes. Most citizens would like to see some reasonable and objective solution of the industrial strife that now is disrupting reconversion. Unfortunately, the record of the "fact-finding" procedure indicates that any claim of impartiality for this process is a gross misrepresentation.

The Administration bill would authorize the President to appoint such boards in cases certified to him by the Secretary of Labor. Each board would report to the President "its findings of fact and such recommendations concerning the dispute as the board deems appropriate." Its facilities and staff would be provided by the Secretary of Labor. The bill provides for an interval of not more than 30 days known as a waiting or "cooling off" period during which it would be "unlawful" (though no penalties are specified) for anyone to promote or encourage work stoppages.

Because the Administration did not wait for Congressional action upon its proposal, but appointed a number of fact-finding bodies to deal with current emergency cases, we have been afforded at least a partial preview of how the procedure may be expected to work out if laws establishing it are passed.

If the reports handed down by the fact-finding panels in the General Motors and oil disputes may be regarded as representative, it can be stated conclusively that Government-appointed "fact-finding" boards will concern themselves to only a minor degree with the establishing of facts. A far greater share of their effort will be concerned with the speculative business of forecasting future output and production efficiency and appraising the "ability to pay" of the companies involved. But the predominant emphasis will be placed upon framing recommendations for settling the disputes in line with announced Government wage-price policy.

In short, the procedure essentially will be one of registering with the public a government opinion as to how far wages may be raised in the cases at issue without raising price ceilings. Both the General Motors and the Oil Panels stated, in quite explicit terms, that this was their conception of the job assigned them.

"Fact-Finding" in Auto and Oil Disputes

As the General Motors Panel phrased it: "This board subscribes to, and has been guided by, the national wage-price policy" – which it summarizes as calling for wage increases to maintain take-home pay at wartime levels, to the degree possible without inflationary price rises.

The Oil Panel was even more forthright in the statement of what it was supposed to do. "In the judgment of the panel," it declared, "the earnings of the workers must be as high as is consistent with both the maintenance of the stability of the price structure and the provision for reasonable returns to the owners of industry." In other words, prices and the return to investors are to remain fixed, with labor entitled to an ever-increasing return up to the limit of what the traffic will bear.

Having thus outlined their respective conceptions of the job, each panel proceeded to carry out its mission.

The Automobile Panel recommended that General Motors increase its basic hourly wage rates by 19½ cents, which amounts to about a 17½ per cent increase on the company's average hourly wage of $1.12. The Oil Panel recommended an 18 per cent increase in basic hourly wage rates, or an additional 21 cents to the average wage rate of $1.20.

The General Motors recommendation was based almost exclusively upon the Panel's calculation that a 19½ cent raise would keep weekly take-home pay equal to that earned in 1944 when the work-week averaged 45.6 hours. The calculation turned on an estimate of what the effective work-week was likely to be in 1946.

The Oil Panel's recommendation appears to have been based on a more complex but no more conclusive accounting. After calculating that the maintenance of July 1945 take-home pay after 40-hour shifts were restored would require a 22 per cent increase in straight-time hourly wages, it recommended that an 18 per cent increase be made. It accounted for 9½ per cent of this by noting that this was needed to cover cost-of-living rises, and explained that the rest was justified by a combination of factors including loss of premium overtime pay, higher productivity, and settlements already negotiated. Since the Panel gave no indication of the weight given to these several factors, it may not be unfair to assume that the last-named was given preponderant importance, since 18 per cent was the increase already granted in collective bargaining by Sinclair and certain other oil companies.

Higher Pay Without Higher Prices

Both panels stated that the pay increases recommended could be met without raising price ceilings, but neither documents its case on this score with very conclusive "facts".

The Oil Panel confined its observations on this account to the statements that only one company in its group had pleaded "inability to pay" and that the industry was in a generally profitable position during 1943 and 1944.

The Automotive Panel stated that, under a number of assumptions about the 1946 operations of General Motors which it believed to be valid, the Company would have higher earnings than it had in 1941, its previous record year. It specifically stated that its findings in the case were not applicable outside the

automobile industry, but it recognized that the General Motors settlement would more or less determine the settlements of other automotive companies. It stated that it had not been able to arrive at a clear conviction as to the ability of other auto makers to pay similar wage advances, but it dismissed the issue by observing that they could expect to operate at full capacity in 1946, and that this should provide savings to offset the increased wage expenditures.

From the management point of view, one of the most serious limitations in the panels' procedure was their failure to deal with any of the Company claims put forward. In ordinary collective bargaining the demands of both sides are advanced and concessions in one direction are traded for concessions in the other. Here, although the companies involved had insisted upon their need for guarantees against contract violations and wild-cat strikes, and for other union concessions, nothing but the wage issue was considered by the "fact-finding" bodies. The General Motors Panel specifically recommended that the wage increase of 19½ cents be granted, but that otherwise "the status quo prevailing before the strike be restored by the reinstatement of the 1945 contract between the parties." Handled thus, fact-finding becomes indeed a wholly one-sided exercise.

Both panels accepted, quite uncritically, the general position taken by Government spokesmen that wage increases are inflationary only if they are directly translated into price advances. It should be obvious that all wage increases add to the inflationary pressure, if made at a time like the present when consumer purchasing power far outstrips the volume of goods and services available to satisfy it.

"Fact-Finding" Dodged in Steel and Rails

It is ironic, too, that even while the Automotive and Oil Panel groups were holding the "government policy" line, the President and his Reconversion and Stabilization Directors were busily at work trying to dent it. In the steel dispute, although price rises in this industry have a particularly sharp inter-industry impact, hearings by the appointed fact-finding board were deferred while negotiations were carried forward by the President and his advisors under which the industry was offered a price increase of approximately $4.00 a ton on condition that U. S. Steel and the United Steelworkers agree upon a mutually acceptable wage boost. It is hard to avoid the cynical conclusion that wage increases constitute the major administration policy, and that the principle of not translating them into increased prices is sacred only in those cases where there can be some reasonably plausible showing that wages may be raised without price advances.

Much the same general conclusion — that the "facts" are controlling only if they support a substantial wage increase — is sustained by the history of the administration of the Railway Labor Act of 1926, often cited as a glowing example of how "fact-finding" by so-called Emergency Boards of Presidential appointees has served to prevent strikes on the railroads. It is true that reports of almost all of the 31 Emergency Boards appointed to look into threatened railway strikes in the 20 years since the act was passed have provided the basis for a settlement of the disputes in question. The fact — a real fact — remains, that in 1941 and again two years later the wage adjustments found appropriate by Emergency Boards in major railway labor disputes were revised upwards at the White House after the unions involved rejected them as unsatisfactory and threatened to strike. The second upward revision was made after government seizure of the railroads to prevent a national transportation tie-up. When the "facts" did not indicate a large enough wage increase to satisfy the union and the Administration, the "facts" went out the window.

It would be irresponsible to deny the importance of finding some tenable solution of current disputes that threaten to completely disrupt the reconversion process. But upon the evidence of experience, "fact-finding" boards cannot be expected to operate according to the common conception of their function — as agencies designed to sift out for the public an objective and significant weighing of the facts behind conflicting claims.

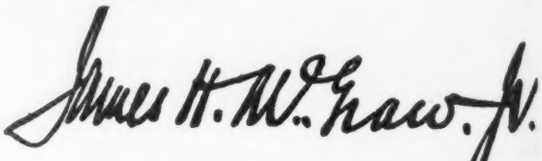
Without Principles Facts Mean Little

Facts, if they are assembled upon a sufficiently partisan basis, can be made to document almost any case one wishes to establish. The major difficulty in marshalling facts to resolve wage disputes is that there are no agreed-upon principles to determine the levels at which wages should be set. In the absence of such principles, it is inevitable that "fact-finding" boards, appointed by the Administration, manned largely by those who helped develop and administer Administration wage policies, and depending for technical assistance upon Administration Departments, will serve merely to implement Administration wage policy.

If Government means to reassert its wartime authority to fix wages — an objective specifically disavowed by the President and seemingly wanted by no one — it should accept the responsibility directly, rather than operate to that end through "fact-finding" boards which are independent in theory, but which cannot be so in fact.

The failure of the brand of "fact-finding" now urged upon Congress by the President is evident. Therefore, we must look for a solution along other lines.

What is needed is for labor and management to agree upon the principles that should govern the determination of wages under free collective bargaining. When such agreement is reached, then and only then, can fact-finding become an objective and useful instrument for settling wage disputes.



President, McGraw-Hill Publishing Co., Inc.

TEXTILE WORLD

Volume 96, Number 2, February, 1946

CHANGING TEMPO IN TEXTILES

TEXTILE PRODUCTION *Must Be Further Stimulated in 1946*

HIGHLIGHTS: *1945 output slightly under 1944 but 70% above 1930-1938 average—Retrogression all came in second half of year—1946 will not exceed 1945 in pounds unless serious incentives are introduced—Vast production needed to block inflation—Of the fibers, cotton scored drop from 1944, wool and rayon both showed gains.*

By WILLIAM B. DALL
Managing Editor, TEXTILE WORLD

TIRED BY THE OVER-STIMULATION of the war years, the textile industry slacked off its productive effort at mid-year in 1945 with the result that total poundage consumption of fibers for that year was the lowest since 1940. It was 2½% below 1944, 8½% below 1943, and and 12½% below 1942, the all-time peak year. However, production (as gaged by fiber consumption) in 1945 was high compared with prewar years, being 70% above the 1930-1938 average. The first half of 1945, if repeated in the second half, would have placed the year 2½% above 1944.

Statistically it is not possible to forecast a gain in 1946 over 1945. The loss, however, may be small, not exceeding 5%. From the viewpoint of hope, common sense, and vital necessity, the trend should be the other way. The economy of the United States greatly needs a huge gain in textile production not only to satisfy essential needs but also to aid in restraining the over-all threat of inflation.

MUST FIND INCENTIVES. To get an increase in production, incentives both to management and labor must exist. The drive of the war years brought poundage of fibers consumed in the mills of this country to undreamed-of levels, nearly doubling the similar figure of 10 years previous. The push of patriotism, necessity, and the general spirit of the times accomplished that great record. Today, no generally recognized incentives remain. Management sees scant profit or even loss under rising costs and fixed price ceilings; labor is in a mood of unrest with more interest in striking for higher wages than in

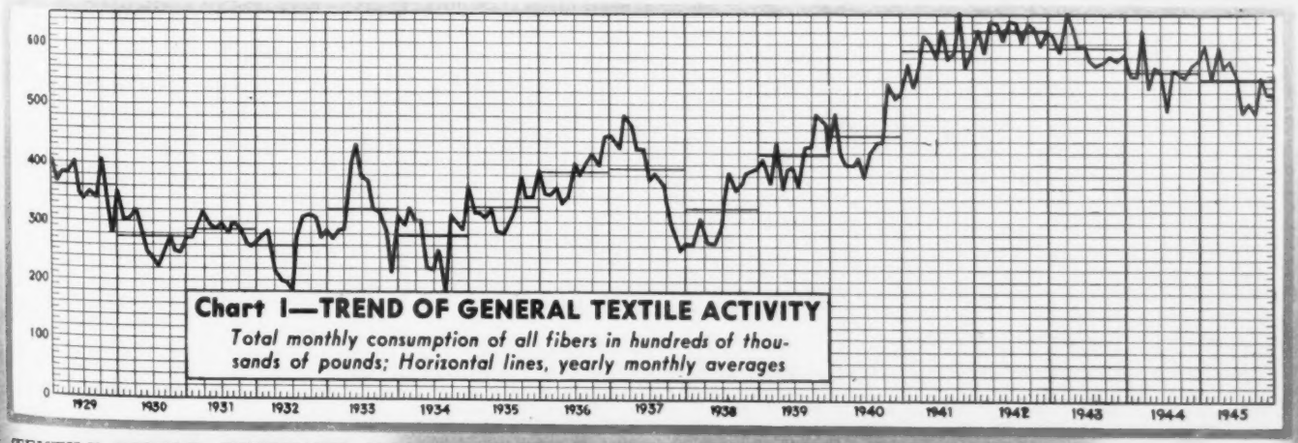


Chart I—TREND OF GENERAL TEXTILE ACTIVITY
Total monthly consumption of all fibers in hundreds of thousands of pounds; Horizontal lines, yearly monthly averages

ANNUAL REVIEW AND FORECAST SECTION

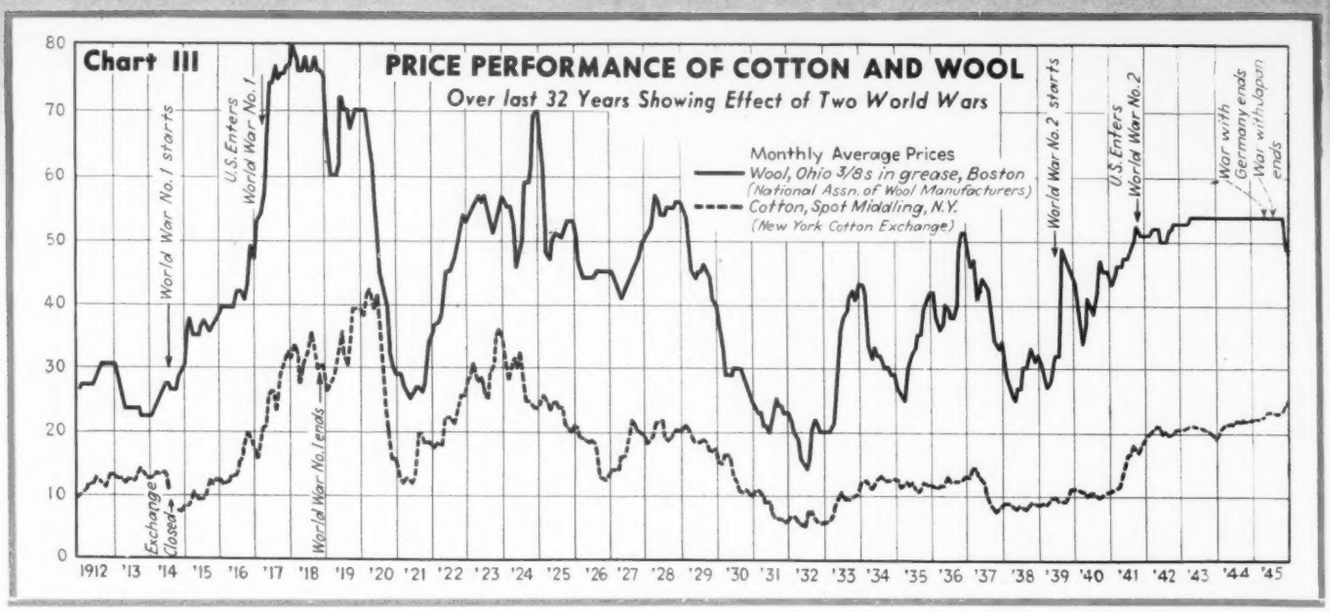


Chart III
PRICE PERFORMANCE OF COTTON AND WOOL
Over last 32 Years Showing Effect of Two World Wars
Monthly Average Prices
Wool, Ohio 3/8s in grease, Boston
(National Assn. of Wool Manufacturers)
Cotton, Spot Middling, N.Y.
(New York Cotton Exchange)
World War No.1 starts
U.S. Enters World War No.1
Exchange Closed
World War No.1 ends
World War No.2 starts
U.S. Enters World War No.2
War with Germany ends
War with Japan ends
80
70
60
50
40
30
20
10
0
1912 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23 '24 '25 '26 '27 '28 '29 '30 '31 '32 '33 '34 '35 '36 '37 '38 '39 '40 '41 '42 '43 '44 '45

carrying on as before. The threat of inflation is not so real in the minds of the great mass of people as was the threat of German and Japanese aggression. The mass of people, therefore, cannot be stirred to action while the antagonist seems so hazy and unreal to them.

Incentives can best be sought in reasonable profit to management and reasonable wage increases to labor. If these elements are brought into the picture soon enough, the statistics for 1946 may take on a changed complexion. Production levels, however, cannot return to wartime peaks because of an actual scarcity of available labor. They might be turned upward to effect some recovery in production rate, some satisfaction of consumer demand, and some sopping up of the gigantic urge to buy, which is perhaps the most dangerous of the elements leading toward inflation.

With 95% of the physical reconversion of all industry completed, the only output gains recorded have been in a few basic industries and in some lines of producers' goods. The dilemma is largely psychological with current thinking swayed by emotion and stubbornness. In January, production was still falling off due not only to strikes but also to lack of intensity of effort for the job at hand, resentment on the part of manufacturers squeezed between rising costs and fixed-price ceilings, and reluctance of sellers to make forward commitments because of the uncertain wage and price situation and the threat of inflation. There is more cash in circulation than ever before, credit is easy, and interest rates low.

PRICE RESTRAINT OVERDONE? So far, OPA has done a good job in restraining prices, the index quoted in one source being 140 now as against 190 at the close of World War I and 250 shortly thereafter. Students of the situation believe that present price control should be viewed realistically, and reasonable advances in ceilings be allowed with the same enforcement as now current. They view that move as superior to a blind holding-of-the-line policy while floodwaters build up behind it to a point where all controls will eventually be swept aside. Authorities are convinced that sharp inflation must inevitably be followed as before by sharp deflation; and, at that point, the country would perforce be diverted into a planned economy with the free-enterprise system fading into the background.

"Our future is in our hands," says one economist. "We can cure the situation virtually overnight by an avalanche of production."

Stock hoarding for higher prices is alleged as current in many branches of the textile field. Those in position to know believe that it is not present in primary circles on a scale to cause any concern, but, to whatever degree it may exist, it would doubtless be abandoned if and when the price future gave real hope of stability. There are reports of accumulations of garments due in part to confusion of wartime controls.

THE RECORD BY FIBERS. Considering the textile industry's raw material consumption for 1945 by individual fibers, it is at once evident that all of the decline registered in that year occurred in cotton. In fact, the other two fibers which enter into the total figure, wool and rayon, each made slight gains. Cotton consumption in 1945 was about 5% below 1944, 13% below 1943, and 19% below 1942. Estimate is that 1946 will record a further 5% decline from 1945. Yardage will not decline to the same percentage because the dominance of heavy goods due to war demand has let up. Dollar value in 1946 will certainly equal 1945 and probably exceed

Shipments of Tire-Cord Rayon in 10 years

Year	Pounds	Percent Increase from previous year
1936	336,300	.....
1937	917,200	173.0
1938	3,784,000	313.0
1939†	8,800,000	133.0
1940	9,569,000	8.7
1941	18,251,000	91.0
1942	28,443,000[1]	56.0
1943	55,800,000*[1]	96.0
1944	118,500,000*[1]	112.0
1945†	195,000,000*	65.0

* Includes Export. † Estimated.
[1] Textile Economics Bureau.
From W. D. R. Straughn, Tire Yarn Sales, Rayon Division, E. I. du Pont de Nemours & Co.

TEXTILE WORLD
Textile Mill Activity Index

1923–25 average = 100

1929	115	1937	125
1930	89	1938	103
1931	93	1939	132
1932	83	1940	142
1933	104	1941	188
1934	90	1942	198
1935	105	1943	189
1936	124	1944	177
		1945	173

it, the outcome hingeing on price development through the year and the extent of the probable advance. Reference to Chart IV shows that the yardage trend has been downward since the beginning of the quarterly yardage figures in 1943.

Wool consumption in 1945 proved to be 2½% above 1944, though 3½% below its peak in 1943 and 2¼% below 1942. Yardage of apparel fabrics, estimated at 400,000,000 linear yards for 1945, is about 10% less than 1944. The factor contributing to the gain in wool consumption for the year is the return of carpet mills to carpet production after reconversion from duck which has again made carpet wool consumption a factor.

Dominance of foreign wools in general consumption, which began in 1941, continued on an even greater scale in 1945, reaching 90%. Near the end of the year, the fixed-price basis for sale of domestic wools was reduced by the Commodity Credit Corp. by about 7c. per pound. Foreign wools were being brought in before this change at figures about 22% lower than the price on domestic wool. Until further adjustment takes place, foreign wools still hold the more advantageous price position.

Reference to Chart V shows fluctuations in production of various wool textiles but no real declines in any classification except for the drop in women's wear from its peak in the first quarter of 1944. The prospect for 1946 is for only a small decline in wool consumption which may be erased if the carpet industry can multiply production to balance the likely loss in apparel fabric operations. Dollarwise, the industry should run ahead of 1945 because of the probable rise in prices.

Rayon continued its record of annual gain, which remains unbroken from the beginning except for slight recessions in the depression years of the '30s, the last of which was in 1937. Rayon's use in 1945 was 9% greater than 1944, 17% greater than 1943, and 23% greater than 1942. For 1946 there is no apparent reason for any recession—on the contrary, gains in rayon consumption up to perhaps 10% may be

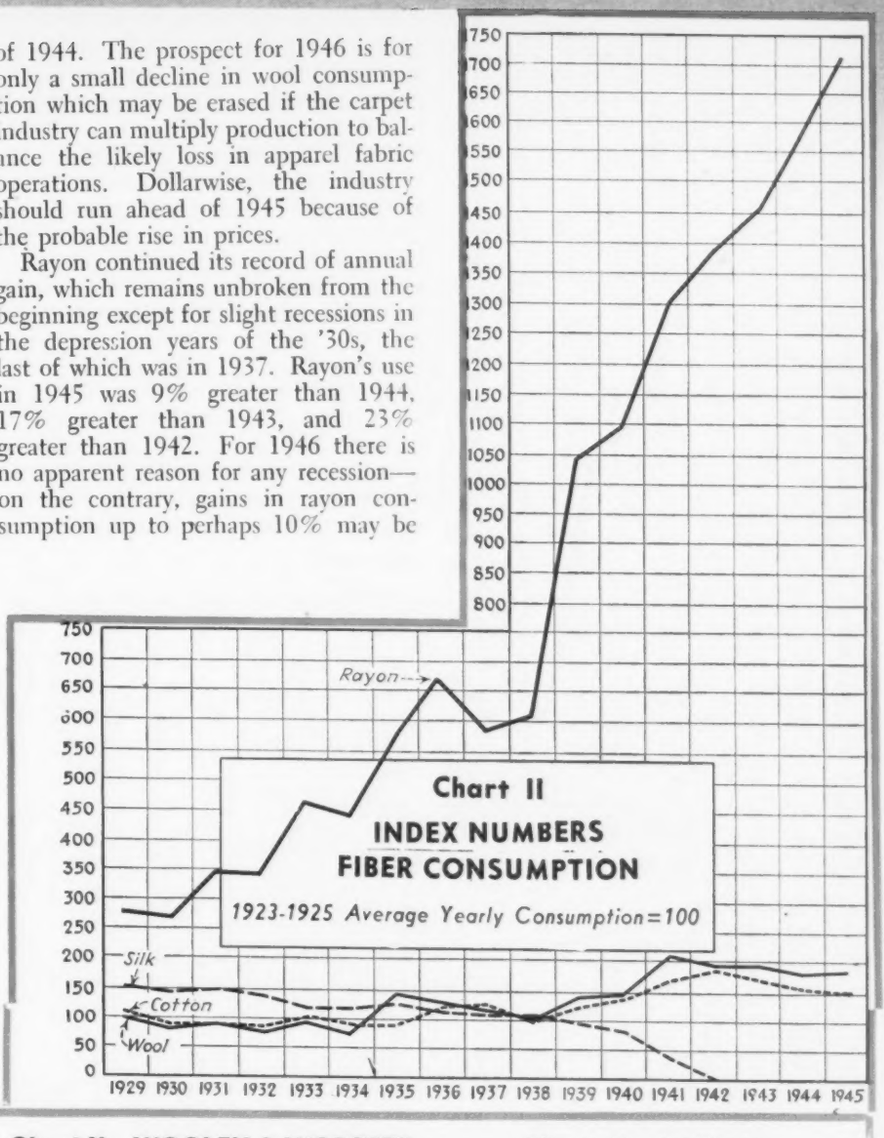


Chart II
INDEX NUMBERS
FIBER CONSUMPTION
1923-1925 Average Yearly Consumption=100

Chart IV—COTTON
Woven Broad Goods
Production by Quarters

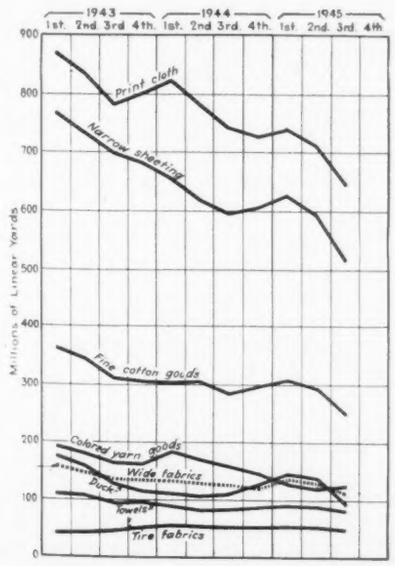


Chart V—WOOLEN & WORSTED
Woven Goods
Production by Quarters

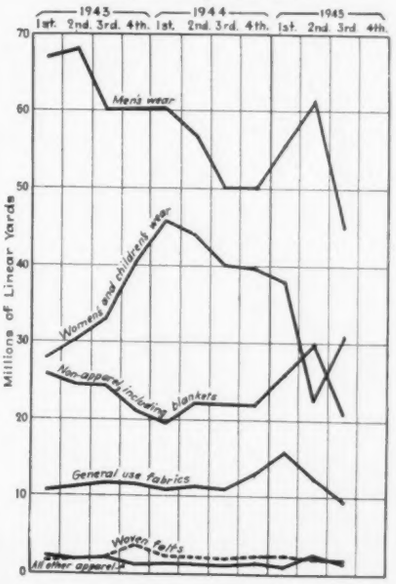
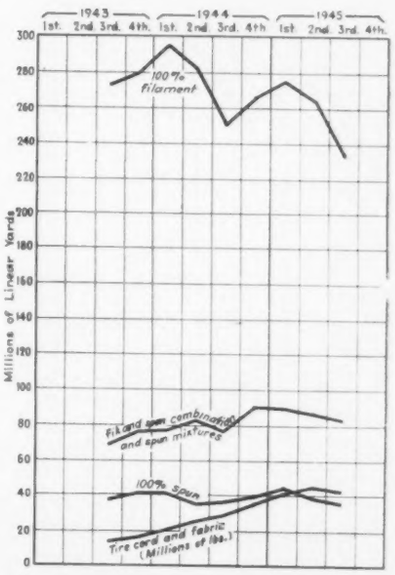


Chart VI—RAYON
Woven Broad Goods
Production by Quarters



recorded. In fact, the gain is limited only by production of the various yarns and staple fibers. All-filament fabrics are likely to hold their own or rise if weaving facilities can step up the yardage; spun-staple fabrics are slated for gains, and tire-cord should hold its gains or rise further since there is still unsatisfied demand. In hosiery, the loss in viscose and acetate rayon will be made up by nylon, which, although a synthetic, is not a "rayon" and is not included in these statistics. Rayon full-fashioned hosiery produced in the fourth quarter of 1945 is estimated at 5½ million dozen pairs against 9⅓ million in the first quarter. The gap is just about filled by the 3¾ million dozen pairs of nylon hosiery estimated to have been made in the fourth quarter, whereas none was made in the previous quarters.

SILK WILL REAPPEAR DURING CURRENT YEAR. Silk will doubtless reappear during 1946 but will not be important volume-wise. Ceiling prices have been taken off raw silk. The last figure, set in 1941 on the government's purchase of frozen silk, was $3.08. Lately a price of $12 to $14 has been quoted on silk from Brazil. Already Italian and Chinese silk is being shipped to the United States.

Each of those silk sources is said to have about 20,000 bales available at the present time.

Japan will ultimately send in some of the 46,000 bales now in stock (said to be of low quality). Possibly 50,000 bales of Japanese silk available through 1946 will be of grade suitable for hosiery manufacture. That amount is only about one-sixth of the quantity used in American hosiery in 1939, the last "normal" year.

Mills Increase Buying of EQUIPMENT *and* SUPPLIES

HIGHLIGHTS: *Purchasing in 1945 up 24% over 1944 — Steel and electrical strikes present puzzle for 1946.*

By EDWIN D. FOWLE
Publisher, TEXTILE WORLD

IN 1945, purchases of equipment and supplies by textile mills increased 24% over 1944, as shown in Chart VII below. TEXTILE WORLD's index reached 160 (60% above 1929), almost equal to the high point of 161 reached in 1941. The steep ascent from the low of 96 in 1943 was approximately at the same rate as the steep descent which preceded it.

In studying this annual chart, it is still necessary to bear in mind that war activity sustained the purchasing of supplies while the restrictions of the War Production Board largely prohibited the purchasing of new equipment. In consequence, the supply factor has remained fairly constant since 1941; and it is primarily the new-equipment factor which not only dropped the index to its low point but which has brought it up again.

SUPPLY INDEX. Supplies are those items which a mill consumes regularly, in rough proportion to its production—such as chemicals, lubricants, card clothing, travelers, bobbins, cones, loom leathers, and so forth. By going back over its records, TEXTILE WORLD finds it possible to index this factor separately. In other words, if we take the supply purchasing in 1940 as 100, the index figure for 1941 was 150; for 1942, also 150; for 1943, 140; for 1944, 141; for 1945, 151.

The fact that the supply climb in the last two years was opposed to a decline in textile-mill production, caused by manpower and materials shortages, can be laid partly to the efforts of mills to replenish declining inventories. However, some of the climb indicated for 1945 can be laid also to increased prices in the closing months of the year. And finally, since the chart is based on figures obtained from the supply manufacturers, rather than from American mills, a certain amount of new foreign business is included.

Although a climb in new-equipment purchasing is strongly indicated by the chart, the index nevertheless does not begin to show the huge demand for textile-mill machinery which existed in 1945 and which will be even larger in 1946. This is because the machine builders were able to furnish only a fraction of what the mills wanted. Most builders were not converted from munitions work until the latter part of the year; and, even then, many suffered from shortages in both manpower and materials. Were this chart an index of orders placed, rather than an index of money actually spent, the curve would have reached an all-time high in 1945. Again, if it had measured the industry's desire to place orders before doing so was legal, this unrecorded climb would have registered an impressive start in one of the early war years.

Certainly, the textile-machinery business has not been faced for a generation with anything like the present demand for its products. Years will be required to satisfy it, and American mills are going to be to some degree in competition with foreign mills in securing

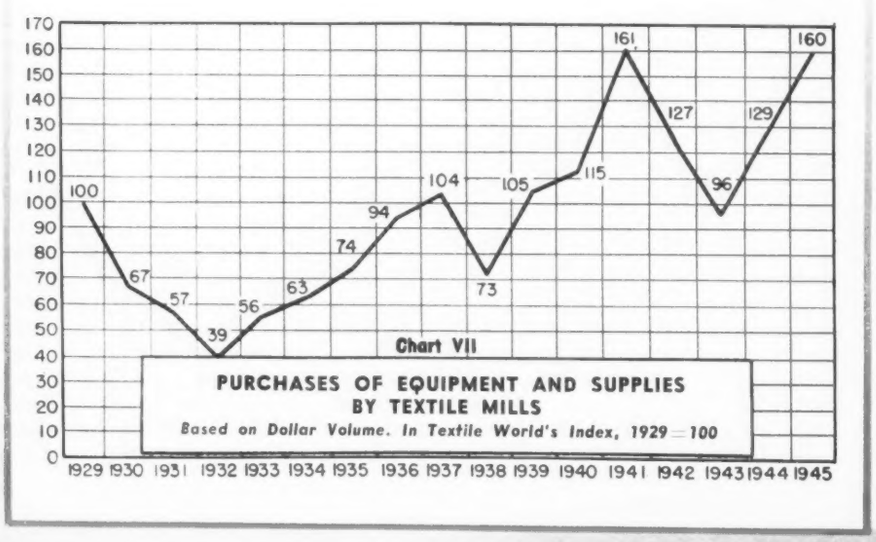


Chart VII

PURCHASES OF EQUIPMENT AND SUPPLIES BY TEXTILE MILLS

Based on Dollar Volume. In Textile World's Index, 1929 = 100

equipment. The industry is badly in need of renovation, is more modernization-minded than at any time since World War I, and has money to spend. Furthermore, it has an urge to expand to capitalize on the great dearth of textile products throughout the world.

1946 OUTLOOK. At this writing, the outlook for purchasing in 1946 is clouded by the steel strike and the electrical strike. These might reduce buying in two ways: directly, by making it impossible for manufacturers to turn out the products on order; indirectly, by so shutting off supplies to the mills—such as card clothing, for example—that some plants would have to curtail production or even shut down completely and so would be out of the market for any and all supplies.

Thus, it can be that the strikes will not only deprive the American public of the automobiles, refrigerators, and radios which it wants to buy, but will possibly at the same time further deplete its already impoverished wardrobes and linen closets. Unfortunately, whatever the duration of the strikes is likely to be, additional weeks and possibly months will be required to get the struck plants back into full production again.

Since it is recognized by government, industry, and even labor leaders that the ultimate solution to our constantly growing inflation danger lies in full production, it seems difficult to believe that these grave strikes will be permitted to extend through a large part of the current year. Therefore, in the belief that America will muddle through this crisis because it has to, and in recognition of the fact that at least the manpower shortage is definitely on the mend, we predict that our index will rise again in 1946.

Washington Bureaus Bothered by **SHORT SUPPLY** *of Textiles*

HIGHLIGHTS: *World-wide garment famine seems inadequate in itself to stimulate great textile production—WAC hastening disposal of government surplus textiles—Export needs are large —OPA's future involved in policy toward inflation—UNRRA makes 1946 estimates.*

By GLADYS MONTGOMERY
Washington Bureau, TEXTILE WORLD

SERIOUS OVER-ALL SHORTAGE of textiles is the most realistic appraisal for at least the first half of 1946 as reported in the various Washington bureaus. The disparity between current and prospective textile production and domestic requirements is sharply accentuated against a background of a world-wide garment famine, more particularly in the liberated areas, where the situation is so forlorn that virtually "rags and tatters" walk the highways and byways.

Most of WPB orders which had governed practically the entire production and distribution pattern of cotton textiles before V-J Day were removed by October, 1945. Order L-99 which regulated loom production of fabrics was retained simply to maintain a minimum production of bag fabrics and certain fabrics needed for low-cost clothing programs. Order M-317A, the principal distribution order, has been modified to the point that it now provides set-asides for essential export and bag fabrics only. Order M-388, was revoked and in its place Order M-328B was expanded to give necessary assistance to apparel manufacturers participating in the low-cost clothing program. The only priority ratings still effective in the cotton-textile industry are for military procurement, export programs, the M-328B programs, and a limited number of CC ratings granted under PR-28.

EXPORT OUTLOOK. Present estimates place the world shortage of cotton broad woven goods in 1946 at 2 billion linear yards. Export markets, it is believed, could pay for 4½ billion yards as compared with combined exports of 2½ billion yards during 1945.

The difficult task of allocating the available supply of cotton textiles to countries where they are most needed continues to rest with the Combined Textile Committee which carries on

Commerce Department Reorganizes, To Improve Its Service to Industry

Textiles in world trade may receive new impetus as a result of the reorganization of the Department of Commerce now underway. This reorganization calls for the setting up of several new sections in place of the Bureau of Foreign & Domestic Commerce. While Secretary Wallace will need Congressional approval of his plan, the pattern is already defined. Three new divisions, headed by men who will have the rank of Assistant Secretaries of Commerce, are the Office of International Trade, the Office of Domestic Commerce & Industry, and the Office of Small Business. Two other sections which do not rank with Assistant Secretaryships are those of Business Economics and Field Operations.

ARTHUR PAUL

Arthur Paul formerly vice-president and a director of Dexdale Hosiery Mills, will be director of the Office of International Trade. He advocates the industrialization of the so-called backward nations, as he believes our best customers are the industrialized nations. Mr. Paul made it clear to TEXTILE WORLD'S representative that items in short supply here, such as textile machinery, should not be a part of the present export program.

The office of Domestic Commerce is headed by Brig. Gen. Albert Browning, formerly Assistant Director of Material in the Army Service Forces. Commodities and manufactured products, wholesale and retail distribution, etc., come under his direction.

The Office of Small Business, under directorship of Laurence F. Arnold, formerly Director of Small War Plants Corp., will help the small business man with marketing research, new tax policies, technological and managerial advice, etc.

The Office of Business Economics will analyze business trends and is headed by Amos E. Taylor; the Office of Field Operations will consolidate and expand the present field services.

despite the joint action of President Truman and the prime ministers of Great Britain and Canada in terminating the Combined Production & Resources Board under which it functioned during the war and the Combined Raw Materials Board. It operates as an autonomous body (along with a few other committees which allocate commodities in world short supply) deriving its authority from the governments concerned. From this source and from government agencies dealing with the same problem, the following unofficial information has been gathered on the supply expectations for 1946.

It had been hoped that about 1 billion yards of cotton textiles (excluding that sent to Canada) would be exported from the United States during 1946. This figure, however, was based on an expected annual production of 10 billion yards of broad woven cotton goods, whereas present estimates, based on first quarter production, indicate about 9 billion yards for the year. First quarter export is set at about 201,700,000 linear yards, exclusive of Canada. The Department of Commerce has announced an export program of approximately 185,000,000 yd. of cotton piece goods. However, this does not include the amount to be sent to China and small allowances included in the other figure.

The exports from U. K. depend chiefly on the rate of war and war-industry manpower demobilization and its reabsorption into the textile industry. Planners hope for 700,000,000 yd. annual export of cotton goods, with the greater part of the increase over the current 540,000,000 yd. coming in the latter part of the year. India's total export of cotton goods will run about 400,000,000 yd., according to current estimates. This is a far smaller amount than had been expected. Estimates of Brazilian exports of cotton textiles for 1946 are about 350,000,000 yd.; Mexico 100,000,000 yd.; Canada 25,000,000 yd.

DISPOSAL OF SURPLUS. The War Assets Corp. plans to put on the market before Mar. 1 about 30,000,000 yd. of cotton textiles. This is the first large quantity of cotton textiles to be declared surplus and includes herringbone twill, cotton drill, print cloth, sateen, poplin, silesia, cartridge cloth, and uniform twill. It will be the policy of WAC to place piece goods on the market as rapidly as possible, even though it may mean by-passing regular procedure. Inventory reports listed approximately $174,000,000 worth surplus in textiles and wearing apparel as of the end of December, of which $165,000,000 was programmed and on sale.

Sales of surpluses of textiles and wearing apparel in the third quarter of the calendar year 1945 totaled $5,116,194; in the fourth quarter, sales ran to $55,350,089. Estimated first quarter, 1946, sales are $201,245,644. It should be noted, however, that wearing apparel in this case includes used clothing and shoes.

With the recent appointment of Lt. Gen. Edmund B. Gregory, Army's Quartermaster General, as head of the War Assets Corp., disposal of surplus textiles is likely to move forward with greater speed and efficiency.

General Gregory assured the writer that he intends to place special emphasis on rapid disposal of textiles. It is his desire to make no changes in the present general methods of disposal of surpluses. He has to retain the same established offices and will refrain from competing with private business.

OPA'S FUTURE. The Price Control Act, which is due to expire on June 30, probably will be extended until the end of 1946, at which time the balance between supply and demand will determine its further renewal. Look for a paring down of OPA powers, which will be confined chiefly to prices of essential items. The pricing agency is in a tough spot now in its attempt to control prices and hold down inflation without having the authority over other controls that affect costs, such as wages. Its success and its life depend on how long it takes the nation to return to volume production.

On Jan. 14, 1946, OPA complied with legal requirements by filing notice of proposed ceiling prices on the 1946 crop of raw cotton. Since notice had to be of record 15 days before the beginning of the planting season, it simply means that OPA is now in the technical position to impose ceilings in the

(*Continued on page 236*)

Navy Testing New Uniform for Enlisted Personnel

WINTER DRESS

The Navy is testing a new uniform for enlisted men during the first quarter of 1946, after which a major change in the present uniform may be forthcoming. For the test, 2500 uniforms have been sent to the Atlantic and Pacific Fleets and to shore stations. They will be worn and stowed under all types of conditions. Commanding officers will then make criticisms and recommendations. The switch to the new uniform, if made, will take place after stocks of present uniforms are depleted. Illustrations show the new dress uniforms, left winter, right summer. Conventional trousers replace the laced "sailor" type worn by seafaring men since the fourteenth century. The black neckerchief which legend says was designed by the British Admiralty in mourning for Lord Nelson will be replaced by a black four-in-hand tie. The body-tight jumper will give way to a jumper-type shirt similar to a sport shirt, which can be worn with open neck, or buttoned for dress. A tailored, waist-length battle jacket is provided for dress or winter attire. There are three separate uniforms in the new outfit—blue, gray, and white—with shirts to match. The blue and white are dress uniforms, while the gray is primarily the working uniform. White trousers may be worn with the blue battle jacket in warm weather. The present Navy "Pea coat" has been retained. Headgear includes a blue garrison cap for the blue uniform, and the present white hat and a gray baseball-type cap to be worn with the white and gray uniforms, respectively.

SUMMER DRESS

Economists Foresee Textile Production at Permanently **HIGHER LEVEL**

HIGHLIGHTS: *Report on economic research stresses that industry must achieve relatively lower costs in production and distribution as well as aggressively develop and publicize its improved products—Technological progress both a threat and a promise—Warning against unwise increase in installed capacity.*

DEMAND FOR TEXTILES, after the unusual conditions of the next two or three years are passed, can be maintained at 20% or more above the 1935-39 average if the textile industry lowers costs of production and distribution and follows an aggressive policy of developing and publicizing improvements in its products, according to the analysis of post-war prospects contained in the introductory report issued this month on the economic research undertaken by the Textile Foundation and the Textile Research Institute.

The report was prepared by Dr. A. M. McIsaac, Dr. James G. Smith, and John W. Cadman, Jr., of Princeton University under the direction of the Economic Research Committee of the institute, which is headed by Robert R. West, president of Esmond Mills. It is the first of a series of studies dealing with important phases of textile production and distribution.

"The outlook for the textile industry will be more promising," says the report, "if total national production, employment, and income can be maintained at a 150-billion-dollar level than if general economic activity should recede to the levels familiar before the war. However, a high level of general economic activity will not by itself eliminate postwar problems in the textile industry nor preclude the need for far-reaching readjustments. . . . Combining elements of both threat and promise, the continuing march of technological progress represents one of the dominant strands in the unfolding pattern of post-war economic development, involving new or improved raw materials, processes, and products which manufacturers cannot ignore without danger of being eventually swamped with the rising tide of competition."

HUMAN ELEMENT IMPORTANT. Imagination, initiative, and flexibility in applying the results of technical and economic research become more important than ever before, continues the report. Profits will largely depend on anticipating trends of consumer and industrial demand, and on producing textiles that meet those demands more effectively and at lower relative costs than rival commodities. It seems clearly inevitable that a continuing and, in some directions, an even more pervasive body of government controls will in the future influence the means, methods, and costs of production, access to raw materials and markets, and the general level of economic activity.

After immediate shortages have been met, demands for textiles will be increasingly affected by the level of national production and income, by the level of textile prices as compared with prices of other consumers' goods, and by the competition of textiles and non-textile substitutes.

Another compelling factor toward reduction of costs, which is analyzed in the report, is foreign competition. American textile manufacturers, it states, may reasonably urge that any changes in American tariff schedules under the Trade Agreements program be made in a series of moderate steps spread over a period of a few years. This would give more opportunity to carry through plans for plant modernization and to achieve some of the resultant gains in productive efficiency before facing the full force of foreign competition over lowered tariff barriers.

INTEGRATION. The report touches on the possibilities of vertical integration in achieving production and distribution economies and better control of quality and promotion. It also suggests for the mass of small mills on yarn or standard gray goods the possibility of horizontal grouping which should give more advantageous marketing and fuller lines without sacrifice of the advantage of specialization.

It is clear, says the report, that wage rates will not be permitted to recede substantially as compared with wartime levels; and they are likely to be maintained at a higher level. Union organization may continue to gain. There is need, therefore, for close study of experience of manufacturers who have been dealing with labor through collective bargaining. There is also a need for careful appraisal of the procedures of union-management cooperation on the standardization of job classification and adjustment of work loads in regard to improvements in machinery and methods of production. Increased emphasis should be placed on training programs for foremen and supervisory forces and on machinery for handling grievances.

Present prices on natural fibers (cotton and wool) are considerably higher, in relation to synthetics, than before the war; and maintenance of these prices will encourage displacement by synthetics in many uses. Cotton manufacturers in particular have an interest in promoting a program of agricultural readjustment for cotton-producing areas that will put American cotton on a competitive basis against synthetics and against foreign-grown natural fibers.

MACHINERY BUYING POLICIES. The formulation of a sound plant replacement program will be complicated by possibility that revolutionary changes in machinery and processes may make obsolete much equipment that is highly efficient by present standards. Constant contact with latest developments in technical research, adequate provision for obsolescence as well as wear-and-tear, and maintenance of liquid funds for replacement or innovation will contribute to flexibility in year-to-year planning of productive operations.

The present sellers' market will change ultimately into a buyers' market, says the report. Frenzied expansion of textile plants as soon as equipment is available may easily lead to capacity which will prove excessive when the first postwar clamor for goods dies down. From a purely investment standpoint, it would seem advisable to consider utilization of resources for modernization of equipment and perfection of product rather than merely for the purchase of additional productive facilities.

There is probably no time at which a program of standardization of basic units of machinery could be undertaken with better chances of success than at present because a large amount of textile machinery will necessarily need to be replaced within a few years.

TECHNIQUES *Changing for Major Textile Fibers*

HIGHLIGHTS: *Modernization plans far advanced in some mills—Improvements follow conventional lines—Cotton machinery being adapted to wool and flax as well as rayon—Knitting mill production due to increase greatly.*

MODERNIZATION CONTINUES in cotton mills from Maine to Texas. Released in 1945 from some of the responsibility and restriction of war production, a few mills are in advanced stages of modernization, as reported in the November issue of TEXTILE WORLD; however, the vast majority are hampered by shortages of building materials, labor, and new machinery.

Better machinery and methods, tighter plant-layouts, improved employee working conditions, and enlarged or better-diversified production facilities are the virtues most sought-after, both in the well-advanced plans and in the programs just under way.

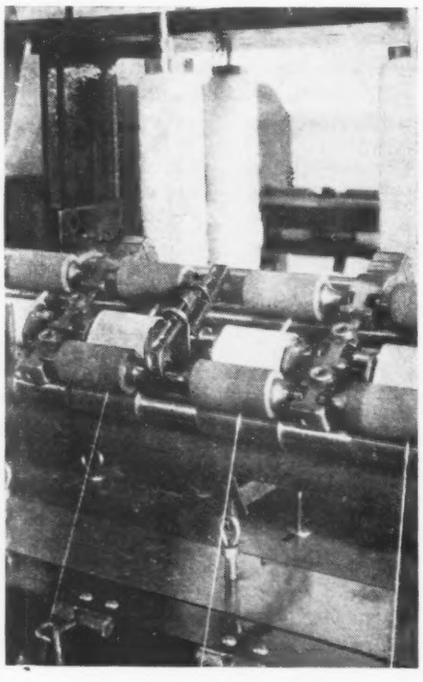
In looking for trends which might enlighten them on the future, mill men do not find either the sensational or the ready-made answer. However, production men believe that the tempo of progressiveness in the textile industry has increased and that it is their job to translate this search for progress into material advantages as fast as practical conditions will permit. The target range for this anticipated progress is considered to be somewhere between advanced conditions for employees and improved competitive position for the mill, with the production engineer and the superintendent "in the middle" of two seemingly contradictory goals.

Yet, some mills have taken practical steps toward achieving these goals, with their premise based largely on the belief that improved plant efficiency will enable them to attract labor and to improve costs.

Thus, mills show keen interest in laboratory control for quality, evaporative cooling systems for spinning and weaving departments, work simplification and methods engineering for improved manufacturing technique in the little things that affect cost, and research for new products, weaves, and methods. In some of these respects, Riverside & Dan River Cotton Mills, Cramerton Mills, and others have shown considerable progress.

In regard to new machinery, mill men pointed out that little of a radically new nature has been released as yet, since machinery manufacturers have been confined largely to war production for the last four years. Reported improvements of radical nature from abroad are met with statements from American machinery manufacturers that they, too, are experimenting with unusual methods for the manufacture of yarns and fabrics.

CARDING. The increased use of mechanically-picked cotton and other intensified developments in cotton agriculture are being observed closely by thoughtful mill men. Fortunately, air filters and condensers have already become available, and these are being used by mills to aid in the cleaning of lower-grade cottons. Their use also permits the elimination of dust rooms, and enables the mill to humidify the picker room.



Large packages and long draf (Casablanca shown here) hold important places in modernizing cotton spinning and in running other fibers on cotton-mill machinery.

Other devices being discussed by mill men are slow-motion drives for pickers, ball-bearings for every practicable picker-shaft, and individual motor-drives for picker sections; while some new cleaners, such as the Superior cleaner and the Lummus cleaner, and a new blending device, the Truslow system, have been reported.

In the card room, continuous card-strippers, vacuum stripping, and roller-top cards for long synthetic fibers continue to interest mill managements, while modified card-room machinery layouts, such as that obtained by Werner Consultants at the American Yarn & Processing Co.'s Woodlawn Mill and described in December, 1945, TEXTILE WORLD, promise returns on card-room transportation costs.

Drawing, roving, and spinning processes have not yet received all the improvements offered by the industry. Lap winder and drawing combined, Bi-coil drawing, regular drawing, and the supplementary rayon drawing-frame are said to be the principal developments of the moment. However, mills continue to rework their own drawing equipment with the addition of spiral gearing and new rolls.

Long draft and larger packages hold the key to roving and spinning-frame modernization. To obtain both, some mills have purchased and installed new spinning frames, while other mills are principally interested in securing the long-draft assemblies for old frames.

The trend toward long draft and shorter roving processes gained momentum in the combed-yarn industry, heretofore considered a bulwark of conservative practices. In the December, 1945 issue of TEXTILE WORLD, some phases of American Yarn & Processing Co.'s modernization were described. One of these phases dealt with the installation of long draft, which eliminated one process of roving and effected other savings in a fine combed-yarn organization.

SYNTHETIC FIBERS. For spinning synthetics, the yarn manufacturer has a wide choice of assemblies for roving and spinning frames. This choice ranges from the standard long-draft system which some mills use for shorter staple lengths to special equipment for long fibers. The "Z" draft assembly is said to have been developed for spinning longer fibers, while other assemblies are

available for roving frames. The four-roll long-draft system is reported to be flexible in the processing of either short staples or the longer staples and to have a simple method for changing over to the various staples up to 3 in.

In supplementary equipment, all of the recent high-speed spooling, warping, and winding machines are receiving considerable attention from mill owners. New twister frames are also being purchased as replacement for twisters which were dug out of mill basements to help in the production of duck and other war products. The possibility of overhead rail transport for beam-twisters interests plied-yarn manufacturers.

Slasher modernization generally follows the trends which developed before the war. Stretch control, moisture control, multi-motor drives, and high-speed slashing, are the newer concepts which mill men are gaging.

Spreaders, or braces, continue to be installed on old-model looms, and mills state that their addition steadies the loom and permits higher speeds. New looms equipped with braces at the factory have been installed at Erwin Cotton Mills, Durham, N. C., as reported in a recent STA meeting.

Although the possibility of shuttleless looms caught the imagination of textile men everywhere, the steady research and development of the fly-shuttle loom cannot be ignored. In addition to the highly automatic features already a part of the loom's operation, Draper has disclosed that research and development continue and that some of the objectives of this research are all-metal lay beams, automatic battery fillers, electronically operated warp stop-motions, and other devices.

ADAPTING MACHINES. Cotton machinery is having its use extended as techniques are worked out for running wool, flax, and synthetics on it. The running of cottonized flax on cotton machinery is just barely starting; and although it may never reach any great poundage, it does represent a development that may increase the use of this fiber in the United States. Special fine Aralac fiber has been developed for blending with cotton and opens the field for new fabrics. Worsted yarns are now spun in cotton mills; and cotton-mill machinery seems especially adapted to the French system in existing worsted mills. Bradford spinners are also extremely interested in this development.

Wider wool cards and use of blends of wool and synthetic fibers are seen as continuing to change the manufacture of woolen yarns. At least one new mill embodying short-cuts and new ideas in woolen yarn manufacture is in the process of being built in the South.

New techniques had to be developed for handling synthetic monofilaments, such as the vinylidene and the polyamides, principally because of their wiriness and the crushing action which they exert when wound on conventional beams and bobbins. Special equipment is indicated for mills planning to weave in any large quantities of monofilaments.

There is a good possibility that one or more of the three new sizing materials for slashing yarns will find continuing use despite the cessation of wartime shortages of the more conventional materials. Although soy bean protein and polyvinyl-alcohol sizes are more expensive than older materials used on rayons, their increased costs may be justified on the basis of their uniformity and of better running warps. Permanent cellulosic sizes are being experimented with on cotton yarn and show promise when their presence is not objectionable in the finished fabric.

MORE KNITTING. As the problems of getting yarn and new machines are solved, there will be great growth in knitting of both hosiery and piece-goods. As 400-needle circular and 66-gage full-fashioned machines become available and nylon yarn becomes plentiful, new methods of operation will undoubtedly have to be worked out. The finer machines present technical problems not found in the older, coarser equipment.

Deliveries of warp-knitting machines are now going forward at an increased rate and are continuing to outstrip the yarn supply available to operate them. The shortage gives mills better opportunities to develop the techniques necessary to run them, since many of these machines are going into new mills or mills not previously operating equipment of this type.

As reports are circulated of German textile developments, the ideas brought back by our technicians undoubtedly will be tried out; for example, the handling of seed-flax fiber. Such a large mass of information has been brought in from Germany that it will be some time after it is all translated before its influence in U. S. technology can be determined.

Refinements Are Keynote of 1945's
NEW TEXTILE EQUIPMENT

HIGHLIGHTS: *Reconversion began year ago—New machines incorporate the expected year-to-year improvements — Radical developments likely to come only slowly — Among year's outstanding offerings are new tricot machines, nylon preboarding equipment, doubler-twister of unusual range, bonded-roving process, and talk of new loom, together with numerous drives, stop motions, handling equipment, testing machines.*

FOR A YEAR which may be considered the threshold of a new era of vast mechanical development, 1945 ran true to form—rumors and advance descriptions of new textile machinery far exceeded in number and importance the actual new equipment which was launched. Although the war did not conclude till after mid-year, reconversion of the leading textile machinery builders had already been in progress for several months before that, due to cut-backs in ordnance and other military equipment and limited releases of previously highly restricted materials. As civilian production was resumed, the products were about the same as prewar except for such year-to-year improvements as might be expected.

Some of the extravagant hopes for greatly increased efficiency may not be realized for years to come, but definitely

improved models have been on the drawing boards and will come off the production lines during 1946. Introduction of numerous refinements was the feature of 1945, including improved drives, stop motions, cloth- or yarn-handling equipment.

KNITTING EQUIPMENT. In actual production-machinery, tricot knitting machines seem to have held the center of the stage so far as new models are concerned. Robert Reiner, Inc., introduced a two-bar, 28-gage tricot warp-knitting machine designed to withstand top-speed production. Large diameter section-beams are accommodated. By using Oilite material on some of the sliding parts, a source of free oil around the machine is eliminated. Various safety features are incorporated, among which is the power knock-off device which stops the rotation of the hand-wheel shaft while the power is on. Robaczynski Machinery Corp. is offering a new tricot machine in two-bar, 26 and 28 gages, which are reported to achieve 500 courses per minute. Width is 180 in.

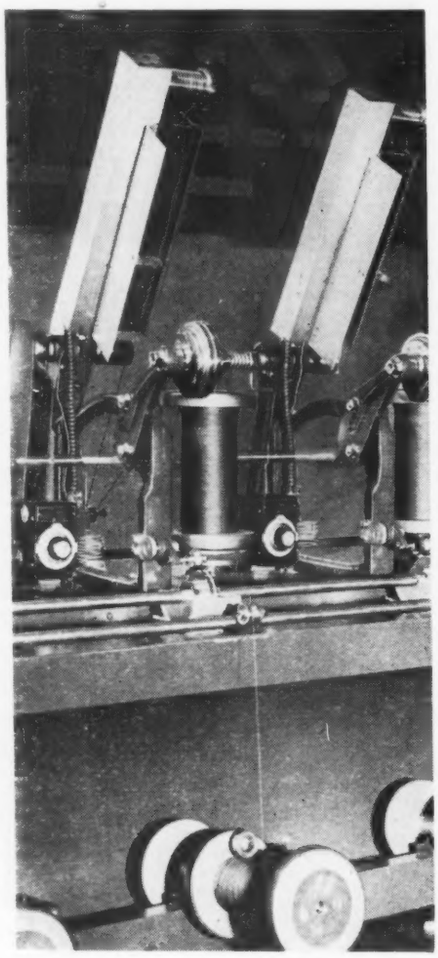
This month it became known that Alfred Hofmann, Inc., had improved its double tricot, or Simplex, machine to the extent that a 32-gage pilot machine just completed has been running at a speed of 340 r.p.m., which is approximately a 30% greater speed than has previously been obtained from this type of machine. This performance was obtained when running 90s single cotton yarn for atlas cloth. Practical mill operating speeds will be 250 to 280 r.p.m.

Initial deliveries are now being made to mills of the unannounced Aveco warp-knitting machine.

Another type of machine which has been improved during the war years and is now being offered from various sources is that for preboarding nylon hosiery. The Turbo Machine Co., Division of Dexdale Hosiery Mills, offered a machine which may be operated by one person; cycle and temperature may be varied to suit. The machine is automatic, save for the pushing of a button by the operative; safety devices prevent opening of door with steam in the chamber. Paramount Textile Machinery Co. offered a unit which is equipped with two sets of 24 forms, has a horizontal steaming chamber, and is said to operate at an hourly rate of 15 doz. prs. Proctor & Schwartz offered a vertical preboarder which requires only 10 sq. ft. floor space and is equipped with 30 boards. A capacity of 18 doz. prs. per hour is claimed.

FOR YARN PRODUCTION. A redesigned doubler-twister has been put on the market by Atwood Division of Farrel-Birmingham Co., which has the capacity of inserting twist ranging from ½ to 70 t.p.i. There are two models, one for packages up to 1½ lb., the other up to 3 lb. A novel stop motion operates on the feed roll so that knots may be tied in the single yarn, and production of yarn with a ply missing is avoided. The machine can be used for doubling and twisting cotton and worsted yarn, as well as for throwing synthetics. No parts need be lubricated under 144 hr. of running time, and most parts require lubrication only one to four times a year.

A recent achievement which developed into the offering of a suitable machine toward the close of the year is the bonded roving invented by technicians of Riverside & Dan River Cotton Mills. The machinery for operating this process is being made by Walter Kidde & Co. The process consists of two steps: (1) the impregnating of the roving with suitable resin and, if desired, pigment dye; and (2) the curing under suitable heat and tension, which results in a yarn of unusual strength. This new material appears to have interesting applications in mechanical fabrics and to be a radical departure from conventionally produced textiles, since the product is actually a yarn without spinning.



The tensioning and curing machine, major unit of the fiber bonding process of Riverside & Dan River Mills. The machine is being manufactured by Walter Kidde & Co., of Belleville, N. J. *Dan River Photo*

NEW LOOM IN PROSPECT. Another departure from conventional process is the bobbinless-shuttle loom produced by Sulzer Bros., of Switzerland, which may eventually be made in this country. A small shuttle, 2½ in. long and little more than a clamp, picks up a single strand of filling from a stationary spool and carries it at high speed across the loom to a receiving station. The filling is cut, and its end is tucked into the selvage. There are a number of shuttles, each returned in succession to the starting point by a belt. A metal track guides the shuttle through the shed so that it cannot touch the warp. This track is formed by a series of aligned holes in vertical plates which have their planes parallel with the warp and lie between the warp yarns along the lay. A suitable slit exists in the forward part of the hole so that the filling may be pushed into position for beat-up. The required movement of harnesses and lay is small so that 240 picks per min. on 150-in. wide goods is possible with only 1½ hp.

As a collection of attachments for looms, the Mountain City Foundry & Machine Co. has designed and placed on the market a fly-wheel drive, a whip-roll rocker, a harness motion, and a beam or brace which extends between the loom sides just below the crankshaft. The last named device is claimed to make old looms steadier and to permit smooth operation at higher speeds. On a three-week mill test, using the "spreader" brace and flywheel drive, efficiency of 94.1% was recorded for the equipped looms against 89.6% for similar looms without the attachments.

USEFUL ACCESSORIES. A feed-roll stop-motion for revolving flat cards has been put on the market by J. S. Christopher. The device, it is claimed, will trip the doffer-handle lever and stop the card whenever thick places, lumps, split laps, or other large masses of cotton or foreign materials in the lap attempt to pass through the lickerin. Damage to lickerin, mote knives, clothing, etc., is thus avoided.

A machine for applying hydraulic force to separate sections of the spin-

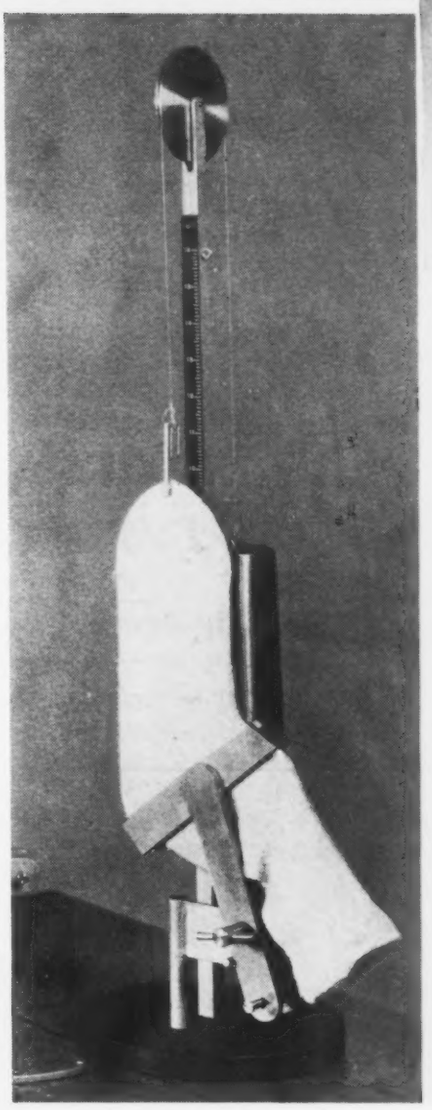
ning cylinder or drum has been designed by Columbia Supply Co., and can be used for removing bearings and connecting shafts without damage to the cylinder or the cylinder head.

A new harness motion has been devised by W. D. Steagall, which operates from the side of the loom by an extension of the camshaft. The dwell may be easily adjusted, as well as the width of the shed. The device is especially suitable for dobby looms and those on fine weaves.

A novel tension control and density regulator, built by Walter Kidde & Co., is being sold by Matthews Equipment Co. for application to winding machines especially when winding yarn for package dyeing. The tension mechanism actually feeds the yarn between two driven, conical wheels. The tension wound on the package is thus independent of the tension produced by the supply. As the tension tends to decrease, the yarn guide moves toward the center of the conical feed wheels, the amount of yarn fed is reduced, and tension increases to the point set. The density control mechanism controls the traverse back independently of the tension. Optimum package density permits easy flow of the liquor when dyeing and produces more even dyeing with less time for penetration.

An unusual homogenizer has been offered by the Marco Co. for grinding and mixing such materials as dyes, finishing materials, sizing compounds, and the like. It can be easily cleaned, has steady, non-pulsating delivery, and automatic wear-control.

Among other significant offerings of equipment during 1945 are noted a cloth expander for coated fabrics, recirculating air devices, variable-speed drives, cots to eliminate eyebrowing, open-coil electric infrared unit, worm-roll fabric spreader, printing blanket washer, air-duct tramp-iron magnet, squeeze extractor, compensator for synchronizing continuous process machines, speed control for drying machines, and a powder film for replacing the back gray customarily used in printing. Virtually all of these items have been described in the Textile Equipment News section of TEXTILE WORLD in the year under review.



Wool shrinkproofing processes, now widely demanded, had their first large-scale use in socks such as are being tested here for shrinkage.

Much Expected From
TEXTILE FINISHES

HIGHLIGHTS: *Shrinkproof wool fabrics wanted most—Work continues on water repellents—Some finishing assistants applied in earlier manufacturing processes—More continuous-process machines being introduced.*

THIS IS A TRANSITION PERIOD for the finishing division of the textile industry. Many processing chemicals and cloth finishes developed during the war or held up because of wartime shortages are now seeking their places. Work is still going forward on many of them, particularly durable and renewable repellents, shrinkproofing compounds, and finishing assistants such as penetrants and softeners.

Long runs of one fabric, such as occurred during the war, are now continuing and have encouraged the development of machines for continuous scouring, continuous vat dyeing, and multi-lap dyeing. One other finishing machine, developed during the war period but not officially announced, is a compact unit for washing, saturating, and aftertreating as well as dyeing. It is seen as especially adapted to continuous processing of short runs of vat colors.

The Army Quartermaster is partially responsible for the development of a machine for "shrinkproofing" knit fabrics, and full-size machines are now being built. The war held up at least one development of a rotary screen printing machine, but a production model is now being completed for use in a newly-formed company.

Scouring and finishing materials for wool promise to simplify some of the problems of woolen and worsted manufacture and to result in production of washable fabrics, for which there is an ever-increasing demand. Phosphates are finding a place as raw-wool scouring agents; and new wool oils, at least one of which is self-scouring, are being used in wool manufacturing processes.

In self-scouring wool oils and permanent finishes applied during slashing or bonding can be seen, in part, the significant trend toward unifying all mill operations. This reflects vertical integration expressed both in closer cooperation between divisions of the textile industry and in actual corporate combinations.

Demand for washable wool fabrics has reached a point where 80% of department store buyers are asking for them, according to a recent survey of 120 department stores made by the Textile Resin Department of the American Cyanamid Co. This survey points out

other finishes being demanded, which the finishing branch of the textile industry must include in its planning. When asked about five specific finishes, the stores listed what they wanted in this order: (1) wool-shrinkage control, (2) gas-fading control for acetate rayons, (3) better crease-proofing, (4) washability of sheers, (5) spot-proofing.

Rayon with dimensional stability was also requested along with permanent moth-resistance, perspiration-proofing, fire-proofing, permanent water-repellency, improved wash-fastness, prevention of mildew, and prevention of shine. Finishing plants must be prepared to meet this demand.

A group of technicians returned the latter part of last month from a study of German finishing methods, and a report from them is expected momentarily.

ENGINEERING *Is Quick To Reflect Modern Trends*

HIGHLIGHTS: *Latest advances incorporated in tire-cord mills built during war — Industry-wide urge to re-equip is strong — Mechanization tends to replace labor and add to plant efficiency.*

ENGINEERING ADVANCES in textile-mill construction during the war years moved rapidly and with great strides—thanks to the Defense Plant Corp. Outstanding textile mills—tire-cord plants —were built which incorporated the latest advances in buildings of windowless construction. They are one-story, of reinforced concrete, with the best in fluorescent lighting and true air-conditioning. The latter includes complete control of atmospheric conditions.

The rapid progress made in textile mill construction during the war at expense of the taxpayer is temporarily slowing, mainly because of high cost of materials and labor, and inability to obtain necessary materials. According to John A. McPherson, of John A. McPherson Co., textile-engineers, construction costs today represent an increase of 140% over those of 1937. Likewise the cost of machinery and equipment since 1937 has advanced 84%.

Some mill organizations have emerged from the war in strong financial position, and a number of these organizations are actually now building or planning new mill construction. These mill buildings measure up to wartime standards established by the Defense Plant Corp. Other mills are making changes, such as rearrangement and consolidation, while still others are erecting plant additions.

GENERAL TREND. The general desire of the industry for 1946 is to get as much new equipment as possible to replace present worn-out machinery. This means close to 100% re-equippage in some mills.

Other trends are toward more and better wash-rooms, improved sanitary conditions, better lighting, and painting for visibility. Extensive use of welded pipe fittings is found in dyehouses because of the superior joints produced and the ease with which replacements may be made. Power plants are under consideration, with many mills adding increased boiler capacity to handle greater processing needs.

The trend in lighting continues in the direction of well-distributed fluorescent lighting installations with local reinforcement in a few special cases. The life of the fluorescent tube has been extended, according to the rating of several manufacturers; and this has a direct bearing on the economy of the installation. More and more light is being added. This trend is influenced to some extent by the practice of the war industries in which operatives where working under high levels of illumination.

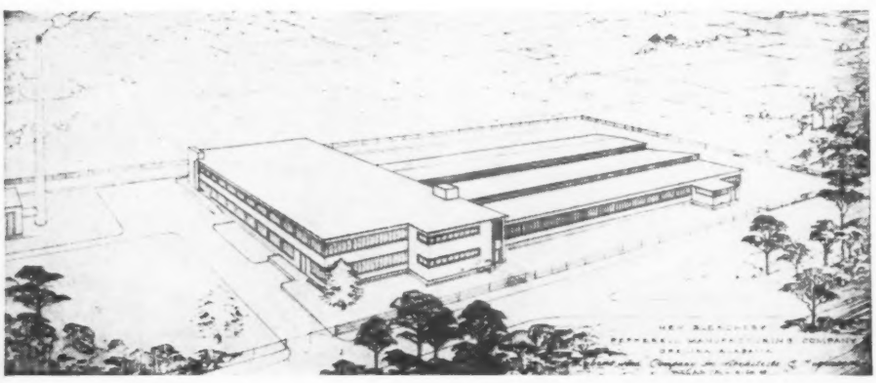
The electrical engineer has been working on the application of dielectric heating to some of the problems of the industry. This is not a cheap source of heat, and its use is probably restricted to a few difficult cases.

Electronics is the word that conjures up wild dreams of automatons doing all the work. A TEXTILE WORLD survey reported in July issue indicates the wide range of possible future uses as well as many applications in service at the present time.

Sprinkler systems for fire protection are using the newer type of chemically operated heads in special locations, such as office installations and other places where a neat appearance is desirable. Piping for heating installations is being welded instead of utilizing flanged or screwed joints, and unit heaters seem to be growing in popularity.

The trend toward individual drives on production machines continues. This seems to be based largely on the idea of better housekeeping, a cleaner mill. Ball-bearings are replacing plain bearings both on machines and on power transmission equipment.

MATERIALS HANDLING. Materials handling has attracted considerable attention as much of the labor in textile operations is used in handling the product from one department to another and from one operation to the succeeding. Labor and time can be saved by improved handling, and frequently the handling can be done in a way that is



Typical of new plants is the bleachery unit of Pepperell Mfg. Co., Opelika, Ga. This plant has approximately 142,000 sq. ft. floor area of long-span construction with 22-ft. bays and 44-ft. divisions or spans. It also has a filter plant with a daily capacity of 2,250,000 gal. and two boilers.

easier on the product and causes less waste and lost motion. Hand-in-hand with material handling goes the tendency to reroute the product through the mill, even at the expense of rearrangement of considerable machinery and sometimes complete reorganization of the floor plan. Straight-line production is the result, and economy of operation the ultimate object.

The personal equation is being eliminated in controlling operations and machines wherever practicable and when economical. Accurate automatic controls are being installed, controls which operate from the beginning with precision when otherwise learning time and deficiency in skill would effect a drag on manually operated machines and processes. Equipment manufacturers are devoting time and effort to make the controls both accurate and reliable. Cleaning is becoming more and more a mechanical problem, and one may expect to see greater use of the electrostatic type in the near future.

In the future more dependance will probably be placed on the engineer or on the engineering department. These technically trained men will find more opportunities to serve the industry in a variety of ways. Research will fall to their lot as well as questions affecting production. Maintenance, as before, will also be their responsibility.

The microscope and the stroboscope will find an increasing field of usefulness under the direction of the engineer. This field will be limited only by the engineer's imagination. The same applies to a certain extent to dielectric heating and its applications. Material handling and controls will be used more and more to ease labor's task and make the mill a better place in which to work.

RESEARCH *Emphasis Shifts to Peacetime Needs*

HIGHLIGHTS: *Many new testing machines have been developed and announcements are expected of others — Some research groups increasing their activities—Foreign developments include package dyeing of rolls of cloth and production of new fibers— Research legislation proposed.*

MANY RESEARCH FACILITIES which were tied up with military projects are now released to follow peacetime applications of the same projects or to go into new fields. This has resulted in some temporary confusion.

The Army Quartermaster has announced that it will consolidate its work at Philadelphia, but consolidation is being held up because of extensive building changes which must be made. Meanwhile, the climatic laboratory is being continued in Massachusetts. Outside research facilities are continuing to be used, and weathering tests are being conducted at Camp Lee, Va.

Many new machines and products have been or are being developed as a result of research. Some which have recently been publicized include new testing machines utilizing strain gages, a new load-elongation recorder, a flammability tester, a yarn scanner, and a tension-vibration cord-testing device. In addition, new techniques have been disclosed in the use of color microscopy, electronic controls, recording spectrophotometer, ultra-high speed photography, polarized light, and the Shirley analyzer.

Fundamental research is going forward on such subjects as the drying of textiles and the structure of fibers. One project closed last year was the study on card speeds. Announcement is expected soon of a machine which uses a unique principle for continuously measuring the diameter of textile yarns.

NEW YARNS. A whole new crop of synthetic yarns may reach pilot-plant or even small commercial production, as a result of wartime and prewar research. These yarns include multifilament vinylidene yarn, soy-bean fiber, peanut-protein fiber, alginate "rayon", polyvinyl-chloride yarn, polyvinyl-alcohol yarn, keratin fibers, and a new polyamide yarn. Some of these are further advanced in Europe than in the United States. Among recent British developments have been package dyeing of rolls of cloth and development of water-tight fabric constructions.

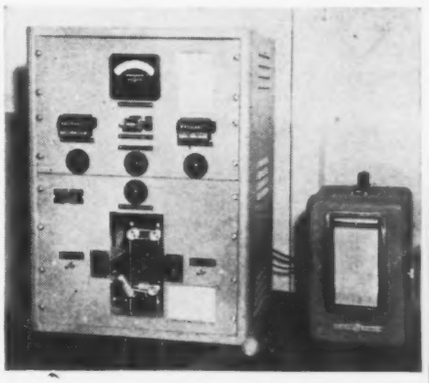
An independent study of cotton was made to show the proper use of California grown Acala cotton; and it is to be expected that research in cotton will continue at an ever-increasing rate, principally due to stimulation from inroads being made by synthetics.

The United States Department of Agriculture is rapidly releasing findings of research and studies of cotton covering many years' work. It is continuing its research into textiles in its four regional research laboratories. In this issue is described the results of a project on acetylated cotton.

The American Association of Textile Chemists & Colorists is augmenting its research activities, also reported in this issue, by employment of a full-time director to supplement the activities of its many research committees. The Institute of Textile Technology has made recent additions to its staff and additions to its research facilities.

The Textile Research Institute announced last month continuation of development of its research building at Princeton in conjunction with the Textile Foundation.

No less than five research bills have been proposed to Congress with the general heading of promotion of science. They are the Kilgore, Magnuson, Fulbright, Byrd, and May bills. (The first four are senate bills; the last one is a House bill.) All are proposed on behalf of national defense, and how they would tie in with textile research is still to be determined.



Yarn scanner developed by U. S. Rubber and General Electric keeps a running record of yarn evenness.

Wartime PERSONNEL POLICIES
Can Assist in Peacetime Problems

HIGHLIGHTS: *Stringencies of war years developed selection and training methods which might never otherwise have been adopted—Mills may continue benefits of these methods by carrying them through into future years.*

IN THE FIELD of personnel selection, training, and relations, wartime practices give good promise of being put to excellent use in the more difficult peacetime period that lies ahead. Forced by the stringency of the war years to recruit labor from unusual sources, to appraise abilities quickly and accurately, to train in a few weeks where months previously were taken, and to keep operatives healthy and happy under curtailed diets and hampered transportation, mill management has learned a lot in a previously little-explored field. There will be actual loss to all concerned if these practices are not continued and expanded in 1946 and in the future.

The fact that numerous textile mills set up or reorganized their personnel departments during the 1941 to 1944 period gives promise that progress in this field will continue. Mills found that the scientific handling of workers and workers' problems was useful in raising the efficiency of their working force, as it resulted in cutting down the rate of labor turnover and in providing needed replacement of the more skilled operatives as age, sickness, or promotion compelled changes in the force.

During the war, the War Manpower Commission and the Apprentice Training Service provided plans and programs for personnel work which many mills adopted and found most helpful. The stimulation toward regular attendance on the job and enhanced efficiency of operation which were given by Labor-Management Committees will be long remembered. Although some mills have let the cooperative work of these committees fade into the background, a few are encouraging their continuance. While the goals are not stimulated by posted production records, attendance competitions, bond drives, and "E" awards, there is still the same field of endeavor in which labor and management should properly cooperate to make their relationship most productive.

SHORTAGES CONTINUE. Shortages of workers, both skilled and unskilled, is still plaguing many units in the field, and the return of veterans has not filled the ranks of the workers to the point where full multiple-shift operations are possible. The lack of skilled workers and operatives of the fixer class is still handicapping much of the industry.

Several mills have found such satisfaction in the apprentice training plan, initiated by the War Manpower Commission and continued under the Department of Labor, that it seems most likely others will adopt all or part of this program. The skilled machine operator who has been promoted to the job of fixer and the so-called "apprentice-trained" fixer who has merely been exposed to the opportunity to learn may have to give place to those fixers who have been put through a broadly-conceived and carefully supervised course, part in the mill and part in the schoolroom. This new program is safeguarded for the interests of both sides by frequent checks and follow-ups, and the trainee must come up to specified standards at various points in the course to progress from step to step.

It has been found important to put the specifications of the program in writing and to list the processes and the related instruction in which the apprentice will be made proficient. A typical schedule under the program contains sections under the following headings: Foreword and definitions, qualifications of apprentices, apprenticeship term, probationary period, work experience, related instruction, administrative panel or committee, supervision of apprentices, certificate of completion of training, special provisions, and provision as to modification of these standards. The part of the training which takes place in a classroom can often be provided by the cooperation the State Department of Vocational Education so that trained teachers, rather than other mill employees, are used. The plant provides the classroom and the study is carried on in the apprentices' regularly employed time.

The utilization of on-the-job instructors involves at least a brief course for them in the art of instruction. Again, the government has set up methods in its wartime Job Instructor Training plans.

The apprentice training plan gives the returning veteran an opportunity to participate in a formal training program and acquire a skilled trade while at the same time obtaining subsistence allowance under the GI Bill of Rights.

Productivity and Unit Labor Cost in Cotton Textile Mills

Year	Output per Man-hour	Unit labor Cost
1939	100.0	100.0
1940	102.5	103.3
1941	102.7	116.2
1942	102.2	135.8
1943	101.0	150.1
1944	100.3	161.2

Bureau of Labor Statistics, May 1945

U. S. SERVICES. The United States Employment Service has been designated by Congress to provide job counseling and placement service for veterans. A state veteran's employment representative has been named in each state. He is a member of the senior staff of USES in that state. In each office, one or more employees are assigned particularly for handling the interests of veterans.

WAGES HIGHER. More than 90% of the workers in northern cotton mills received wage increases in the seven months from May through November, 1945, according to a report of the National Industrial Conference Board. During November, 24.8% of the workers in the wool branch of the industry received wage increases averaging 10.6%. There were substantial pay boosts in other divisions. And now early in 1946 there are evidences of unrest in several important branches and areas.

As labor cost increases, any expenditure on personnel relations obviously declines as a percentage. Mills which can be persuaded of the value of personnel work may be persuaded to make some investment in it now where they may have hesitated before.

ACETYLATED COTTON
Highly Resistant to Rotting

HIGHLIGHTS: *Partial acetylation can be achieved on fiber, yarn, thread, and cloth to forestall microbiological attack—Treatment enables cotton to withstand heat better—Character of cloth unaffected, but dyeing characteristics change—Cross-dye effects possible—Cost of treatment depends on chemical recovery methods.*

By CHARLES F. GOLDTHWAIT, JAMES McLAREN, and SAMUEL T. VOORHIES, JR.,

Southern Regional Research Laboratory, U. S. Department of Agriculture

A MODIFIED COTTON which is highly resistant to mildewing and rotting from the attack of microorganisms can be made by partial acetylation.

By partial acetylation is meant the conversion of cotton cellulose in the form of fiber, yarn, thread, or cloth directly by chemical reaction to a modified cellulose in which some of the hydroxyl groups are replaced by acetic acid radicals, without loss of fibrous character or other textile properties. The material retains completely the outward appearance of cotton but acquires new properties and, upon a sufficient degree of acetylation, becomes virtually a new fiber, suitable for new uses. These new properties have been utilized to only a limited extent although they have been recognized for a number of years.

PARTIAL ACETYLATION. The partial acetylation of yarn and thread has been performed in various ways, for example, in a stainless-steel package yarn-dyeing machine of six-pounds' capacity. The material is wound at low tension on regular Franklin stainless-steel springs; and aside from providing efficient ventilation, the only change in the conventional arrangement is the addition of cooling coils through which the reaction mixture is circulated during the acetylation, to dissipate the heat of reaction.

The wound packages are pretreated with glacial acetic acid, most conveniently by soaking overnight. A mixture of acetic anhydride and glacial acetic acid is then circulated through them and cooled somewhat at the same time. Then the catalyst dissolved in glacial acetic acid is slowly added with continued circulation in the usual manner of reversing the direction of the flow at regular intervals. The reaction time varies from ½ to 3 hr., depending upon the degree of acetylation desired, and upon the temperature employed. At the end of the reaction, the solution is recovered for reuse. The yarn is thoroughly washed in the machine with water and then rinsed with very dilute ammonia solution, washed, and dried.

Conditions for a typical acetylation are indicated in the following, with test data on the product:

Reaction mixture—75 ml. 60% perchloric acid; 30 lbs. of acetic anhydride; 65 lbs. of glacial acetic acid.

Total time—2 hours.

Temperature—ca 18° C.—½ lb. of 12/1s and ¼ lb. of 16/1s on each package.

		% Acetyl	% Breaking Strength Retained
Pkg. 1	12/1	19.1	91
Pkg. 2	12/1	18.9	100
Pkg. 3	12/1	19.0	100
Pkg. 1	16/1	19.6	120
Pkg. 2	16/1	19.5	120
Pkg. 3	16/1	19.5	120

The analyses, which represent yarn from both inside and outside of packages, show very good uniformity of treatment and the strength tests are interpreted as showing no loss of strength per strand. The apparent gain in strength of the 16/1s is probably due to the yarn becoming more compact.

Various sewing threads have been acetylated, but it is preferable to make the heavier and more tightly twisted threads by acetylating the singles yarn and then plying and cabling as required.

TREATING CLOTH. The partial acetylation of cloth has been performed with a series of laboratory size padders, aging chambers, and a washer (Fig. 1). To acetylate cloth in the form of an 8-in.

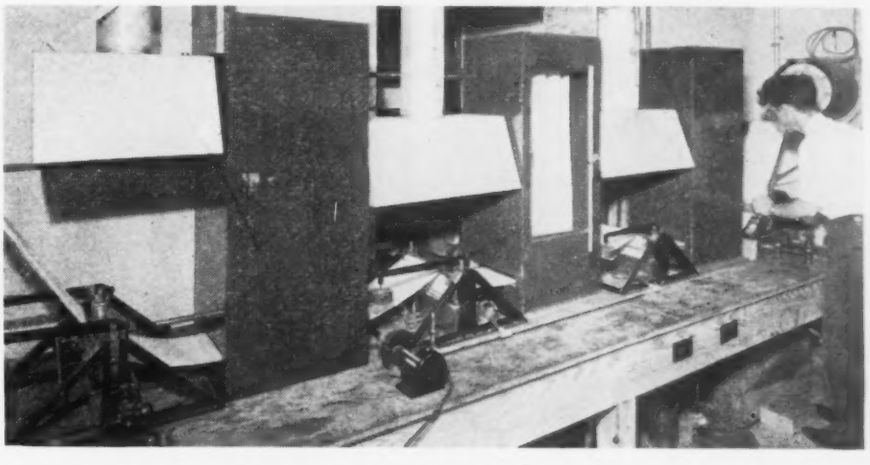


Fig. 1. Laboratory equipment for the acetylation of cloth.

Table I—Soil Bureal Tests of Acetylated Cottons

	% Acetyl	Type of Burial	Exposure Period	% Strength Retained
Osnaburg (gray)	29	Ventilated hot bed	1 year	71
Osnaburg (gray)	29	Open garden	1 year	88
Osnaburg (gray)	29	Indoor beds	6 months	100
Sheeting (bleached)	16.4	Open garden	8 months	95
Sheeting (bleached)	21.7	Ventilated hot bed	6 months	100
Sheeting (bleached)	25.3	Open garden	6 months	96
Sheeting (bleached)	29.8	Ventilated hot bed	6 months	100
Sewing thread (gray), 12/5	23	Ventilated hot bed	3 months	100
Sewing thread (gray) 12/3	25	Ventilated hot bed	3 months	100

strip, it is given a pretreatment with glacial acetic acid at an elevated temperature in the first padder. In the next two padders it is impregnated with the reaction mixture, which is pumped from a reservoir, through the pad boxes, to a second reservoir where additions of catalyst and acetic anhydride are made to restore the original concentration. After each padding operation, the cloth is passed through an aging chamber to allow time for the reaction to occur. Finally, the cloth is washed in running water and wound on a roll. Using this exploratory machine, short lengths of twill and sheeting weighing up to 6 oz. per sq. yd. have been successfully acetylated to 20 to 25% acetyl content with good uniformity.

In general, the acetylation of piece goods offers more difficulty than that of yarn because of the difference in the accessibility of the cotton for chemical reaction. The heavier and the more tightly woven the material, the more difficult it is to obtain uniform treatment. In some of the heavy ducks and oxford cloths, very small areas of unacetylated cotton have been found in the crimps of both warp and filling yarns. Heavy materials, however, may readily be woven from acetylated yarns, with assurance of complete and uniform treatment.

COST. Although acetylation may be considered expensive and a somewhat difficult process, more like chemical manufacturing than like ordinary cotton finishing, even a high cost seems justified when the life of cotton articles would be greatly extended by this comparatively permanent rotproofing treatment.

Approximate estimates of cost can be made from the prices of chemicals and the general nature of the machinery and operations. Close estimates, however, are complicated by changes in weight and by uncertain factors in the recovery of chemicals.

Cotton acetylated to the composition of a monoacetate, about 21% acetyl, gains about 1 lb. for each 4 lb. of initial cotton. On weight transactions, the sale of the extra pound will offset a very large share of the processing cost; but there is a corresponding reduction in yards per pound of final product.

At current market prices, the material cost of the combined acetyl is less than 3c. per pound of resulting acetylated cotton. More than half of the anhydride which takes part in the reaction is converted to acetic acid and becomes a part of the reaction mixture, which can be partially recovered and used over again in the process. However, at the end of the reaction period. the acetylated cotton retains an amount of the acetic acid and anhydride mixture on the order of an equal weight to that of the cotton product. If this is merely washed out and lost it will add a very large item of expense, probably 10 to 20c. per lb. of product. If this should make the cost prohibitive for a given purposes, methods for the recovery of anhydride and acid could be applied. Under these conditions, it would be advantageous to operate at a plant where salvaged acetic-acid solution could be used directly, or where a recovery system is already in operation.

Partially acetylated cotton has advantages over goods treated with the usual mildew- and rot-proofing agents because it is not discolored, odorous, sticky, nor poisonous. It should be prepared very carefully to meet each specific requirement and tested exhaustively before large-scale manufacture is undertaken. It is suggested for use where cotton is exposed to especially adverse conditions of microbiological attack, and may fit particularly well into the manufacture of articles in which cotton is an important although small part of the structure, and where acetylation would insure a much longer life at a relatively small cost.

USES FORSEEN. Among the suggested uses are: fish nets; marine cords and ropes; clothes lines; cords and ropes for tents and farm uses; cloth for sandbags; sewing thread for paper, cotton, or jute bags rotproofed by other methods; tents, tarpaulins, seed bed covers, and other outdoor fabrics; bags

Fig. 2. Acetylated cotton bags after two years outdoors.

Fig. 3. Acetylated cotton bag in contact with ground two years.

Fig. 4. This untreated bag rotted away from its acetylated thread.

ror fruits and vegetables; thread and fabric for shoes, and thread for other leather articles; outdoor furniture and sports equipment; fabrics for control of floods and soil erosion; belting, hose, and mechanical fabrics; and electrical insulation particularly where subject to mildew and rotting. All uses are contingent upon the economics involved.

The observed resistance of acetylated cotton to weathering has been variable. In some instances it has been exceptionally good and in others somewhat inferior to that of ordinary cotton. Consistent excellent resistance may be contingent only on understanding and control of the acetylation and of any degradation which may accompany it.

Acetylated cotton has been reported to withstand heat better than ordinary cotton and has had some consideration for use as tire cord[1,2] where heating in service is detrimental. An acetylated cotton cord heated at 160° C. for two days retained three-fourths of its strength, which is more than twice as much as retained by an ordinary representative cotton cord. The acetylated cotton does not melt like acetate rayon and has a higher decomposition temperature. These characteristics contribute to its suitability for electrical insulation.

The amount of regain moisture absorbed from the atmosphere is about half the amount for normal cotton, and the acetylated cotton does not swell so much in water. Hence, this kind of modified cotton of suitable composition may find use where a cotton-type textile is required to maintain its weight, length, and width as nearly unchanged as possible under varying weathering conditions.

Resist and cross-dye effects can be obtained in cotton goods. Colored resist threads can be made by dyeing and then acetylating. A very large number of cotton colors will not stain either white or colored effects. Acetylated cotton will color with regular acetate-rayon dyes. Union goods of ordinary and acetylated cotton can readily be dyed to two-color combinations.

Partial acetylation of cotton illustrates the possibility of obtaining new cotton products by chemical reactions that change the cotton into partial cellulose derivatives. This general principal represents a broad field for future development of modified cottons to serve new purposes.

PROCESS LONG KNOWN. Cross and Bevan[3] described an aceylated cotton as early as 1901, and pointed out two of its outstanding properties: (a) it absorbed much less than the usual amount of hydroscopic moisture from the atmosphere (a property which has since been found to favor its use for electrical insulation); (b) it was unaffected by the usual solvents for cellulose acetates (including some which would damage acetate rayon if used for spotting or cleaning). It has since been found that, as acetylation proceeds, the cotton acquires the ability to color with acetate dyes and loses the capacity for coloring with the majority of direct cotton dyes until they are completely resisted[4]. Acetylated cotton yarn has been manufactured to a limited extent, particularly in England under the name Cotopa, for both electrical insulation and dye-resist effects[4].

In 1920, Dorée[5] reported that acetylated cotton resisted rotting upon long immersion in sea water, which suggests its use for making fish nets to withstand attack by micro organisms. Finally Thaysen and coworkers[6] found that it resisted rotting by soil microorganisms when buried in the ground and reported on an acetylated cotton which withstood such burial for 7 yr. The latter work on resistance to rotting by microorganisms does not seem to have been carried beyond the experimental stage, although British patents were issued[7].

The long-recognized need for a better mildew- and rot-resistant cotton than is afforded by the usual treatments with mildew- and rot-proofing agents and the greatly increased need for improved fabrics for war purposes led the Southern Regional Research Laboratory to extend the investigation of acetylated cotton. This seemed especially important because, as far as the authors are aware, there has been no development of partially acetylated cotton in any form in this country beyond pilot-plant experiments.

Table II—Percentage of Strength Retained After Burial

	0% acetyl	19% acetyl	25% acetyl	30% acetyl
5 weeks	0	60	89	98
10 weeks	0	42	85	104
20 weeks	0	31	80	102
30 weeks	0	22	67	100
40 weeks	0	11	60	96
50 weeks	0	0	48	91

Table III—Resistance to Microbiological Attack

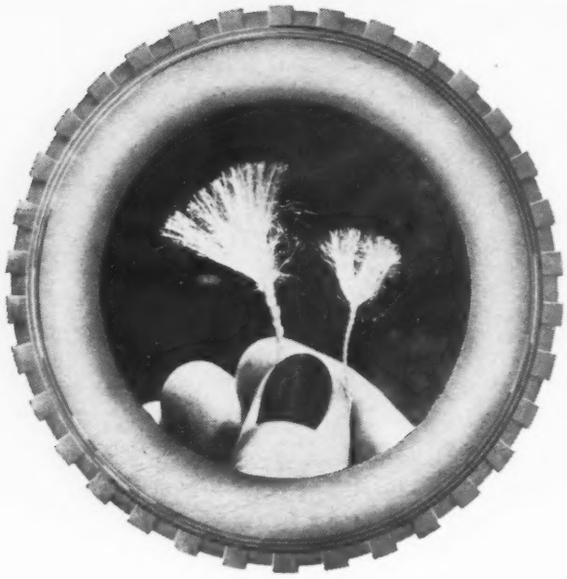
Percentages of acetyl	Percentages of Strength Retained in Pure Culture Tests*		
	Chaetomium globosum 14 days	Metarhizium glutinosum 7 days	Metarhizium preinoculation 3+7 days
0	0	0	0
8	88	102	98
11	92	96	91
16.3	87	97	88

* Tests made through the courtesy of Dr. H. D. Barker of the Bureau of Plant Industry, Soils, and Agricultural Engineering.

TEST RESULTS. Many experimental lots of yarn and cloth were acetylated and submitted to rotting tests at the Southern Regional Research Laboratory, and out-of-doors service tests were made in New Orleans where the climate actively promotes mildewing and rotting during most of the year. Up to the present, the development and testing have been confined almost entirely to retention of breaking strength when exposed to attack by microorganisms and to weathering. Other unusual properties of acetylated cotton, which may also have commercial interest, remain to be fully evaluated. The extensive experience gained has fully confirmed the high degree of resistance to rotting and mildewing of cotton that has reached a suitable state of acetylation. The unusual resistance under conditions so severe as to completely rot ordinary cotton within about a week is clearly shown in Table I.

In the outdoor burial technique, strips of cloth were inserted vertically (with part remaining on top of the soil bed as specified by the American Society for Testing Materials[8]) in ventilated beds heated during the cooler months of the year to maintain their activity, or in open garden-type beds made from natural and prepared active soils, but subject to all weather conditions. Other tests were made with samples com-

(Continued on page 212)



RAYON CORD
Permanent

HIGHLIGHTS: *Increase in use each year since 1936—War accelerated trend—Use of new 2200-den. saves tire-making operations—Textile mills reducing conversion charges—TEXTILE WORLD report of Sept. 1944 quoted.*

"HIGH-TENACITY RAYON was bound to find use as cord in tires," W. D. R. Straughn, of the Rayon Division of E. I. du Pont de Nemours & Co., told the American Association of Textile Technologists last month. The war accelerated the general use since 1943, as a result of the government tire program, he said; but ever since 1936 there has been an annual increase in the amount of rayon cord used. Other points made by Mr. Straughn follow.

There has been much published in journals and newspapers during the past year and a half about rayon cord used in tires made with synthetic rubber, but one large tire manufacturer told this to the public prior to the war about its rayon-cord tires made with natural rubber: (1) Rough going, overloads—136% greater mileage; (2) Normal service—16% greater mileage; (3) Overload and under inflation—32% greater overall mileage; (4) Heavy, long distance, high speed hauls—60% greater overall mileage; (5) Takes more recaps; (6) Runs far cooler.

Since rayon cords retain such good strength when subjected to the higher running temperature of synthetic rubber tires, they permit the use of less rubber, making a thinner tire and thereby reducing the overall operating temperature. The high uniform strength of the rayon cords also prevents impact failures.

MANUFACTURE DIFFERS. High-tenacity rayon is made on equipment quite different from that used for other textile rayon. Much heavier and, in certain respects, different equipment must be installed. Some people think that rayon plants making tire yarn could be changed to other textile yarn overnight, but conversion would take months.

Depth and uniformity of dyeing, drape, fabric hand, and other characteristics most textile men are constantly thinking of are of no consequence in rayon cord. Purification and processing of the yarn after spinning is quite different.

Increased production of rayon tire yarn up to 1944 did not affect the amount of viscose rayon (including cuprammonium) available for other textile uses, and during 1944 there was only a decrease of 17,700,000 lb. from 1943 because of the expansion in production of tire yarn. This poundage was partially offset by the 9,000,000-lb. expansion of acetate filament.

Accurate figures for 1945 are not yet available; however, deliveries of viscose filament (including cupra) will amount to approximately 432,000,000 lb. Tire-yarn shipments are estimated at around 195,000,000 lb., leaving approximately 237,000,000 lb. for other textile purposes. This is a decrease of 27,500,000 in viscose rayon yarn for other textile manufacturing against an increase of approximately 76,500,000

Tying in beam of rayon tire-cord yarn at Scottsville plant of U. S. Rubber Co.
Photos Courtesy U.S. Rubber Co.

At top of page, the new 2200/2 rayon tire cord, which is reducing costs of manufacturing tires, is compared to 1100/2 cord.

Finding Place in Tires

Year	Total Filament Rayon (VC)*	Tire Rayon (Viscose)	Filament Rayon Available for Textile Use (VC)*	Acetate Rayon Filament Available for Textile Use
1938	182,000,000	3,784,000	178,216,000	76,000,000
1939	231,000,000	8,800,000	222,200,000	98,000,000
1940	257,000,000	9,569,000	247,431,000	133,000,000
1941	287,000,000	18,251,000	268,749,000	164,000,000
1942	310,000,000	28,443,000	281,557,000	169,000,000
1943	338,000,000	55,800,000	282,200,000	163,000,000
1944	383,000,000	118,500,000	264,500,000	172,000,000

*VC means viscose and cuprammonium.

Increase in production of tire-cord rayon did not result in proportionate decrease in "textile" yarn for the years shown. Tire cord for 1945 estimated at 195,000,000 lb.

lb. in tire yarn, which indicates that the major portion of the 1945 tire-yarn expansion was not made at the expense of other textile yarn.

YARN SIZES. When "Cordura" brand tire yarn was first introduced, it was made in 275 den. (19.33 cotton count). In 1938, 1100 den. (4.83 cotton count) was introduced, and during 1943 Du Pont brought out 2200 den. (2.42 cotton count) for tire use. During the war period, it is said, use of 2200-den. yarn resulted in increased tire production and some savings in operations. The 2200-den. size is quite popular and will probably be used in increasing quantities for certain tires in the future.

TEXTILE OPERATIONS. So far as twisting and weaving are concerned, there are ample facilities to take care of the present tire-yarn production. A textile technologist used to handling apparel fabrics would probably get very little thrill out of the textile operations connected with the use of rayon in tires. High-tenacity rayon yarns with or without twist are delivered to twisting mills on beams containing between 100 and 200 ends. At present, three producers sell yarn only. One other producer sells yarn and fabric; and the fifth producer, it is said, will eventually be selling only fabric.

The beams of yarn are mounted on conventional down twisters and the individual ends twisted to specifications provided by the rubber company. Almost all companies, up to the present, have used a cord of two-ply construction with 1100- or 2200-den. yarn; therefore, two ends from the first twisting operation are combined to make the final cord.

The twist used is very important, since there must be a delicate balance between the strength and elongation characteristics of the cord. The textile engineer connected with tire design has constructed his cord to give maximum strength and low elongation, but with sufficient elongation to provide suitable fatigue (ability to withstand constant flexing).

(*Continued on page 202*)

Twisted singles are respooled before cabling. Amount of twist and residual elongation affect life of tire.

Creeling spools of 2-ply rayon cord on looms. One tire-fabric manufacturer weaves from beams; another uses unwoven cords.

Implied Warranty Threat Stimulates AATCC RESEARCH

HIGHLIGHTS: *Test apparatus and results displayed at annual meeting—New flammability tester quickly developed—Wash fastness, detergency, mildew, and weathering tests included in reports by nine research committees.*

IMPLIED WARRANTY, meaning that a user may assume that a material is suited to the use for which it is sold, is becoming of increasing importance to textile manufacture, Lew Hahn, general manager of the National Dry Goods Association, stated in New York last month at the annual convention of the American Association of Textile Chemists & Colorists.

This aspect emphasizes the importance of test methods not only for determining in advance whether or not fabrics will perform as they should but also as a basis for legislation, such as the pending flammability laws.

An outstanding accomplishment by AATCC last year was the development in only a few months of a flammability tester to determine the relative fire hazard of various fabrics. Less spectacular were eight other research committee projects reported at the recent annual convention.

For the first time, testing apparatus developed or being developed by AATCC members were on display in conjunction with the convention and are shown in part on these pages.

PROJECTS REPORTED. In addition to the research projects shown in the illustrations, the following were reported upon:

Detergency. The relatively new detergency committee was split into two parts, one to study wool and the other cotton, rayon, and miscellaneous fibers. A laboratory machine, weighing 200 lb., was built by Riggs & Lombard and is to be tested at Lowell Textile Institute.

Mildew. Tentative methods for determining proofness to mildew will probably be offered this spring, as interest in mildew is continuing strong despite the end of the war and the decline in military need for mildew-proofed fabrics. The committee is considering testing specific compounds, using the test methods worked out.

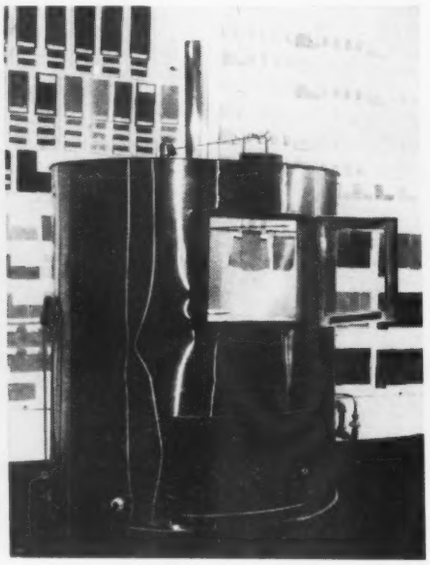
Weathering. The Army Quartermaster Corps is supplying standard fabrics to help find out why cotton deteriorates and how to predict outdoor life. Other groups, outside the AATCC, are also working on this problem.

Water Resistance. Although four test methods have been developed, still others are being considered, such as the Army's dynamic absorption test, because of unsolved problems in correlating test methods with actual use results. Repellency of fabrics after soiling, wear, and cleaning differs greatly from repellency of new, treated fabrics. At least seven different tests are being considered.

Fastness to Light. Standardizing the light source or the use of colored paper for control are the principal problems being worked on in regard to light fastness tests. Both a standardized light and standardized control-paper have been worked out.

Dr. Harold W. Stiegler, recently appointed full-time AATCC research di-

Fire-resistance tester shown is quite different from the flammability tester. The machine being demonstrated by J. R. Redmond, chairman of the AATCC committee on fire resistance, is used for testing flame-proofed cloth. The sample is exposed to a controlled flame for 12 sec. and should not after-flame any more than 3 sec. After-glow is also timed, and standardizing conditions for observing after-glow is now being undertaken by the committee.

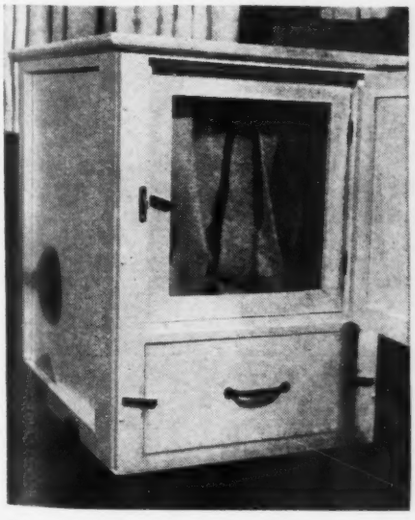


Atmospheric fading of dyed acetate-rayon fabrics is measured in this apparatus. Herbert G. Scull is chairman of the AATCC committee on fastness to atmospheric gases of dyes on cellulose-acetate rayon. Fading is determined by comparison, after exposure, with standardized samples.

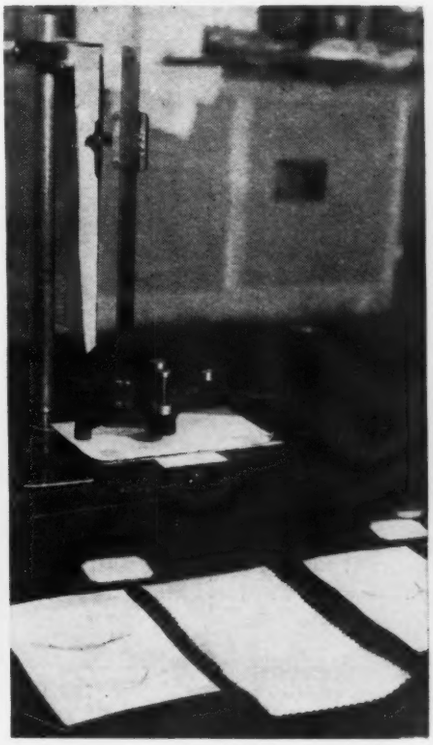
Wash fastness as now tested does not correlate with actual laundry results and is being studied further. Here Charles W. Dorn, chairman of the wash-fastness committee, explains to C. W. Bendigo, editor of TEXTILE WORLD, that corrugations in two new "jars" are expected to simulate better actual laundry conditions. The new jars fit into the standard wash-testing machine. A wool subdivision is to be set up to study washing of wool fabrics.

Flammability tester was developed by AATCC members within the past year to determine what textiles are fire hazards. Some machine was needed due to the wave of interest in legislation on flammability that started with a California law. Dr. Frederic Bonnet, vice-chairman of Dr. H. E. Hager's committee on flammability, demonstrates here how a standardized flame ignites a fabric being tested. Under his hand can be seen a stopwatch that will show how rapidly the fabric burns.

rector, is expected to continue at Lowell Textile Institute many of the research projects started by the various committees. Dr. Stiegler, a graduate of Lowell Textile Institute, was a lieutenant colonel in the recent war.

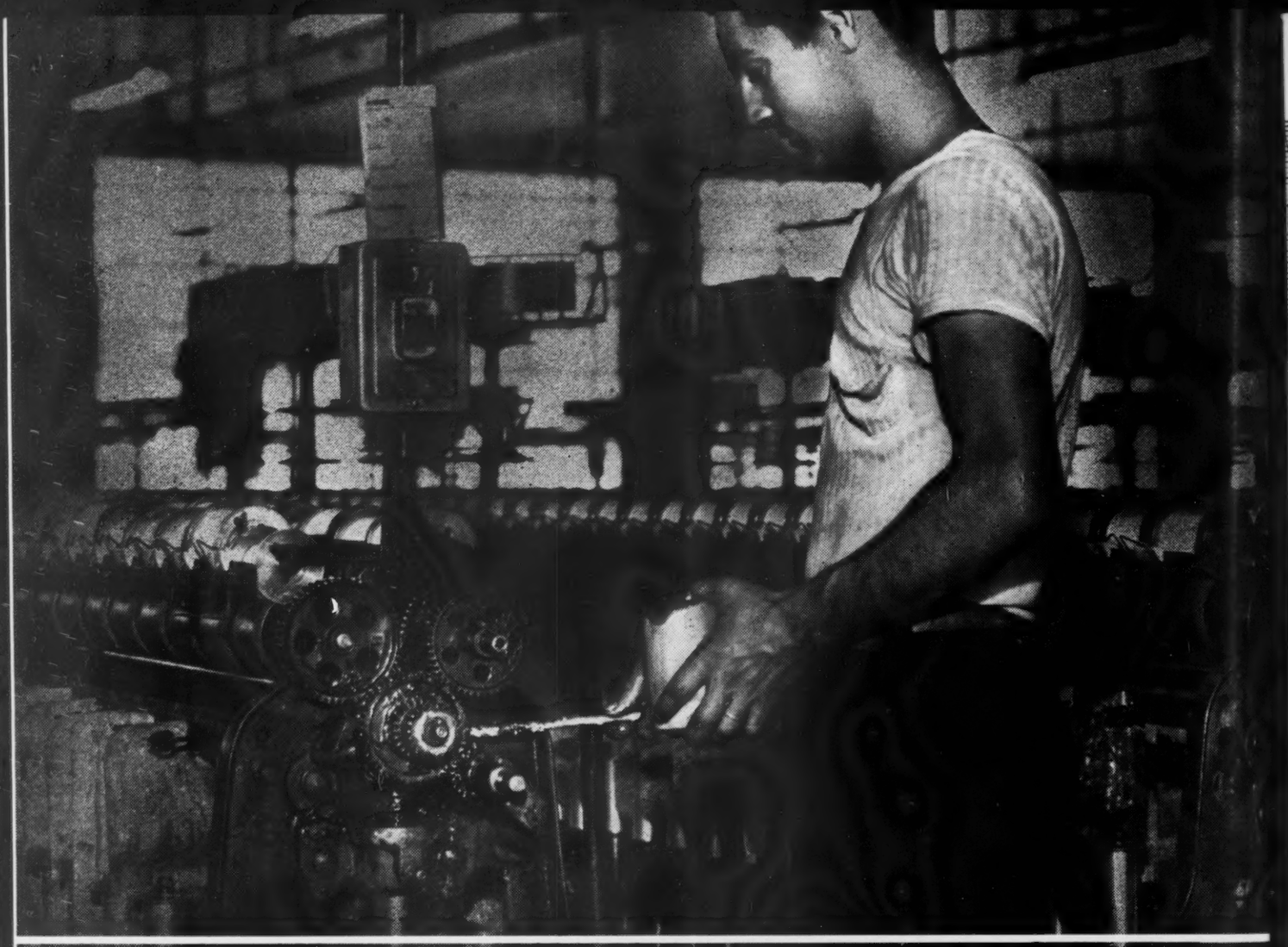


Resistance to insect pests is determined in this sealed chamber containing rug beetles and cloth moths. After exposure, a special ruled device is used to measure the area destroyed. Arthur J. Kellner, chairman of the AATCC committee on insect pests, states that silverfish will be used next to evaluate effect of their damage to normal cloth and their damage to treated textiles.



Drapemeter was developed with AATCC funds by Prof. E. R. Schwarz, of Massachusetts Institute of Technology. After the cloth is mounted as shown, the curved contours are measured at different levels. Thus, a soft fabric tends to maintain the same curvature; but a stiff one straightens out. Measuring the curves permits a stiffness figure to be obtained.

Crock meter, originally made by W. C. Durfee, measures the rate of transference of color from a colored material to an uncolored. The AATCC committee on fastness to rubbing (crocking), headed by D. P. Knowland, has completed its work; and the AATCC has standardized charts for determining whether the sample being tested has very good, fair, or unsatisfactory resistance to crocking. W. B. Dall, managing editor of TEXTILE WORLD, is shown operating the machine and examining test cards.



STAYS ON THE GEARS . . . *Off the Work*

SUN TEXTILE LUBRICANT . . .

Ends Excess Noise, Excessive Maintenance, in Big Eastern Silk Mill

A large silk mill tried several different lubricants for their spinning-frames, to overcome lubrication-troubles, but the trouble went right on . . . lubricant on the floors . . . stains on the work . . . too little lubricant on the machines.

Advised by a Sun Engineer to change to an adhesive Sun Lubricant, specially made for that type of operating-condition, they found their troubles were at an end.

For four years, this plant has used the Sun lubricant, as recommended, and reports that it adheres to the machinery; frames run more silently than ever before; maintenance and wear have been reduced; less lubricant is used.

Years of experience in solving problems for industry are behind each Sun Engineer . . . plus intensive research into better lubricants for specialized purposes. Call the Sun man near you, or write today for the full story of Sun products for the textile industry.

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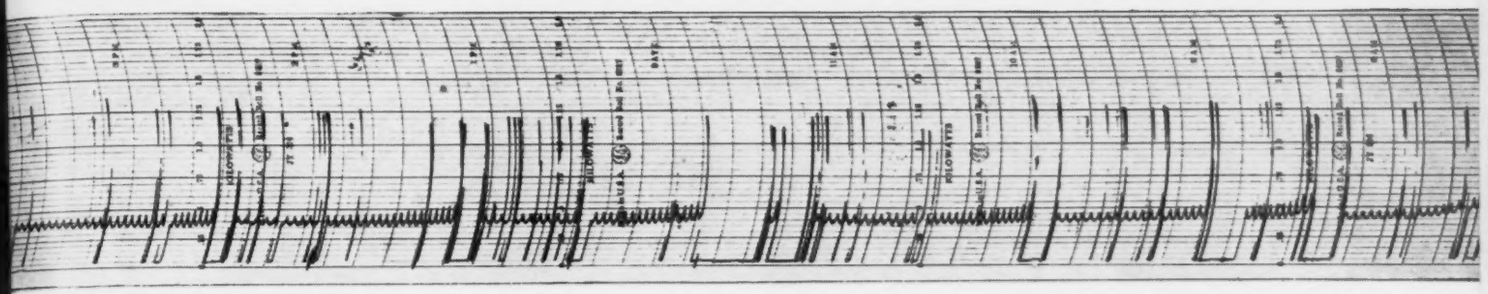


Actual test graph made on slubber frame. The start is at the right where the load averages 3.5 amp. After adjustment the load indicated at the extreme left showed 2 amp. In interpreting the chart the reading as shown is multiplied by 5. The time element must be disregarded as the chart was speeded up to show the use of flyers on the bobbins. The long marks on the chart are caused by starting torque which occurs each time the machine was started up after having been stopped for adjustment.

MOTOR CHECKS Warn of Impending Failures

HIGHLIGHTS: *Constant inspection of electrical equipment of all kinds prevents shut-downs and maintains plants in top production condition—Crew trained to spot trouble—Co-operation necessary between department heads*

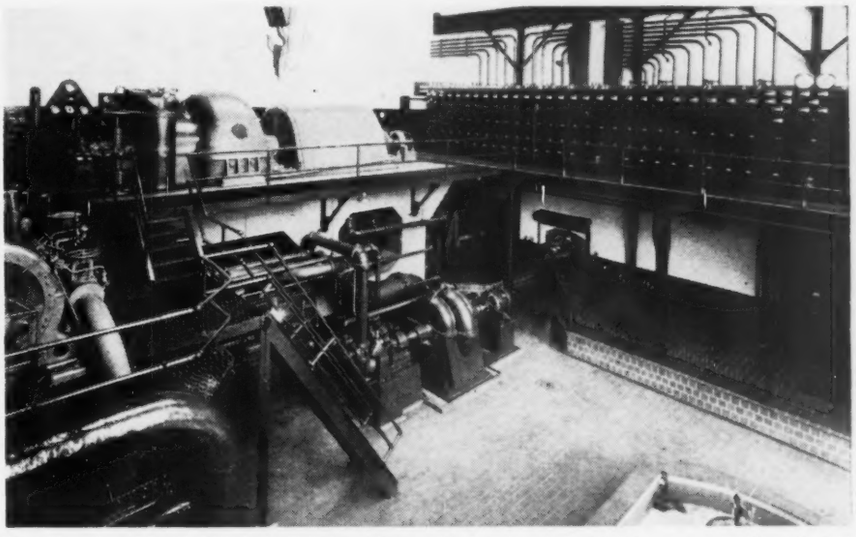
By COMER TURLEY,
Mechanical Superintendent
Pepperell Mfg. Co., Lindale, Ga.

AT THE LINDALE, Ga., plant of Pepperell Mfg. Co., operating on a three-shift schedule, we are using six electricians and helpers on the first shift; two on the second; and one emergency man on the third. These men are used regularly on plant maintenance, on new construction, on village work, and on what we consider possibly the most important duty of all—continuous and careful inspection.

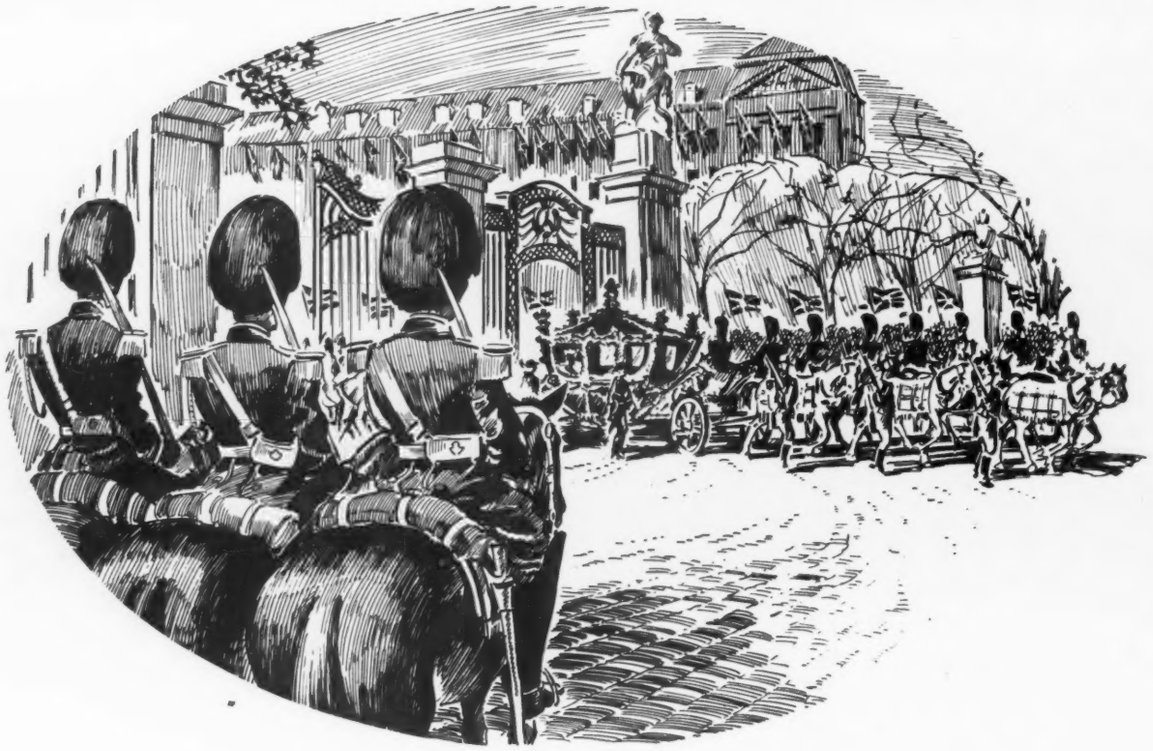
In the village these men are responsible for the street-lighting system, and for the up-keep of the various refrigerators in the community stores and auditorium. They maintain the fire-alarm system and serve as firemen. They keep in condition the several installations of pumps in connection with the village water supply and sewage system; and, since the village contains some 650 houses and has a population of 3,500, there are many incidental duties that fall to their lot.

Their inside duties are as varied as those outside the plant. New installations of improved-type equipment, changes in machinery layouts or variations in the routing of product through the plant, changes in lighting requirements, maintenance of all electric equipment, and, finally, a constant inspection routine keeps them busy six days a week. We consider inspection the most important of the various tasks; because by knowing in just what condition the equipment is, we can know what to expect of it and we can thereby prevent expensive shut-downs due to failure of equipment. Shut-downs mean loss of production.

CLEANING PROGRAM. Cleaning of motors and machinery follows a definite schedule but varies from one department to another. Some sections of the mill have more dust, or fly, in the air than others; and the motors in those sections require more frequent attention. In the spinning room, the motors are cleaned off once a day, whereas the large 50 hp. motor mounted on the



View in power plant showing 6,000 kw steam turbo generator and 32-panel switchboard. This switchboard was built by the mill's own electricians.



—back in 1820: When the total production of coal in the United States was less than four thousand tons and George IV became King of England—two years before the compound gear was used in Textile Manufacturing—John Butterworth established this business in Philadelphia to serve the Textile Industry. . .

126 years of uninterrupted service to the Textile Industry . . . We have designed faster, bigger, better machines to meet every problem. We have helped Textile Manufacturers to keep ahead of the demands for increased production schedules. We have seen the Textile Industry grow from a handful of family-sized plants to its present position as America's Second Industry and we are proud of the part we have played in its development.

Butterworth Service includes a complete line of Machinery for bleaching, mercerizing, dyeing, drying, printing and finishing fabrics and warps; calenders for cotton and rayon fabrics; spinning machinery for rayon filament yarns.

Butterworth Research keeps informed on the new developments in Textiles and Textile-finishing. Butterworth Engineering strives to interpret each new development in terms of Machine Design and Plant Arrangement. Write us.

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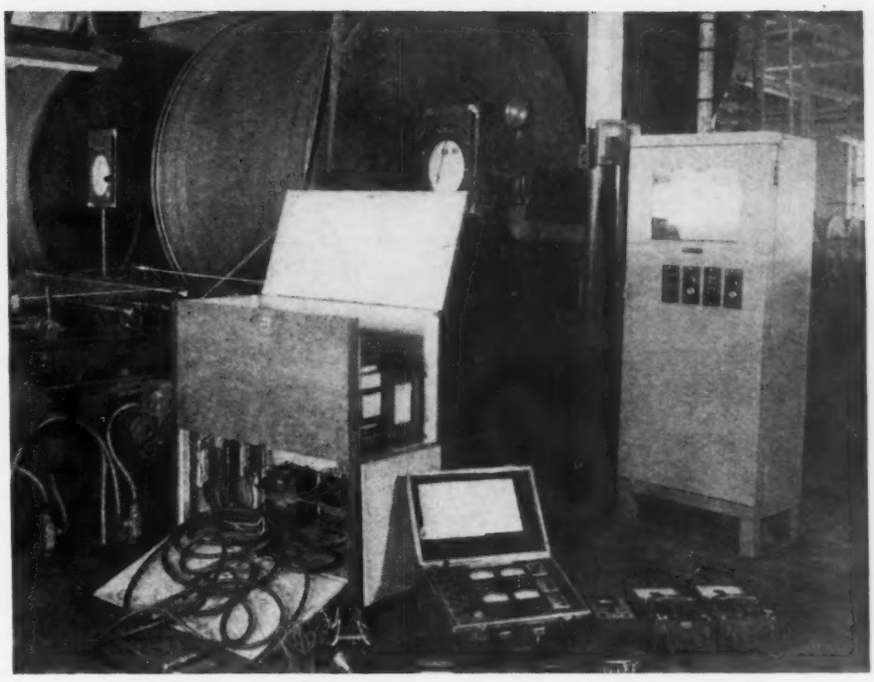
ceiling of the card room is cleaned only once a week.

After motors are cleaned, we follow through with our regular inspection routine. Motors are checked for air-gap, oil, condition of bearings, and, periodically, for load. The testing is done with a portable outfit we have designed and built for the job. This outfit is fitted with rollers or casters, so that it can be transferred easily to any point in the plant where it is needed. It is equipped with all necessary connection cables and jacks, lights, wattmeter, ammeter, voltmeter—all meters being of the recording type, so that a graph for further study can be obtained whenever desired and constant comparisons made.

When a motor is found to be handling an overload, while the machine or machines are in good condition and operating normally, it is removed and a larger motor installed. If a motor is found to be operating regularly below its rated capacity, it is removed and replaced by a smaller unit. The power factor throughout our plant is 88%. We can maintain that figure only by watching carefully the load factors of each individual motor at all times.

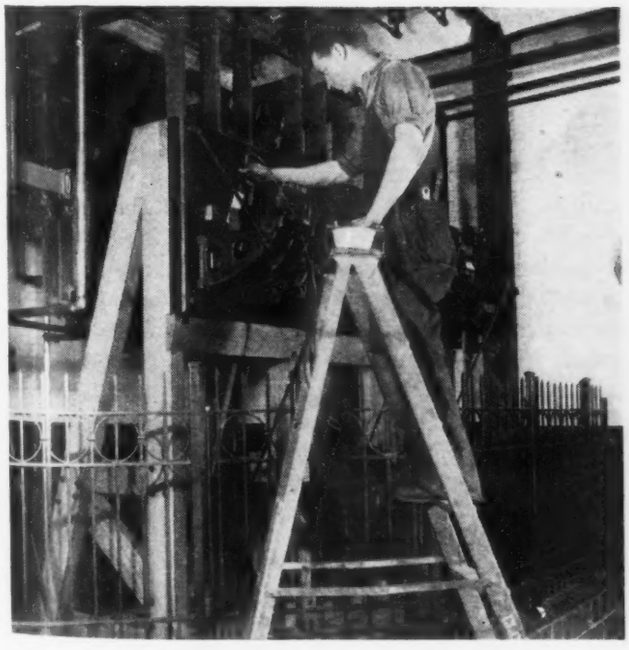
Occasionally, a change is made in machines or a machine is taken off the line; and the news may be slow in reaching us or perhaps never reaches our department at all. The motor involved might then be working under a bad underload until our inspection crew checks up on the next routine trip. Changes in motors to suit working conditions are made promptly unless the new condition is merely temporary. This constant attention, together with the fact that we have 2,000 kva. in capacitors located at strategic points throughout the mill, is responsible for our fairly high power factor and for the absence of line heating.



Testing equipment. View shows portable box containing various types of meters, etc.

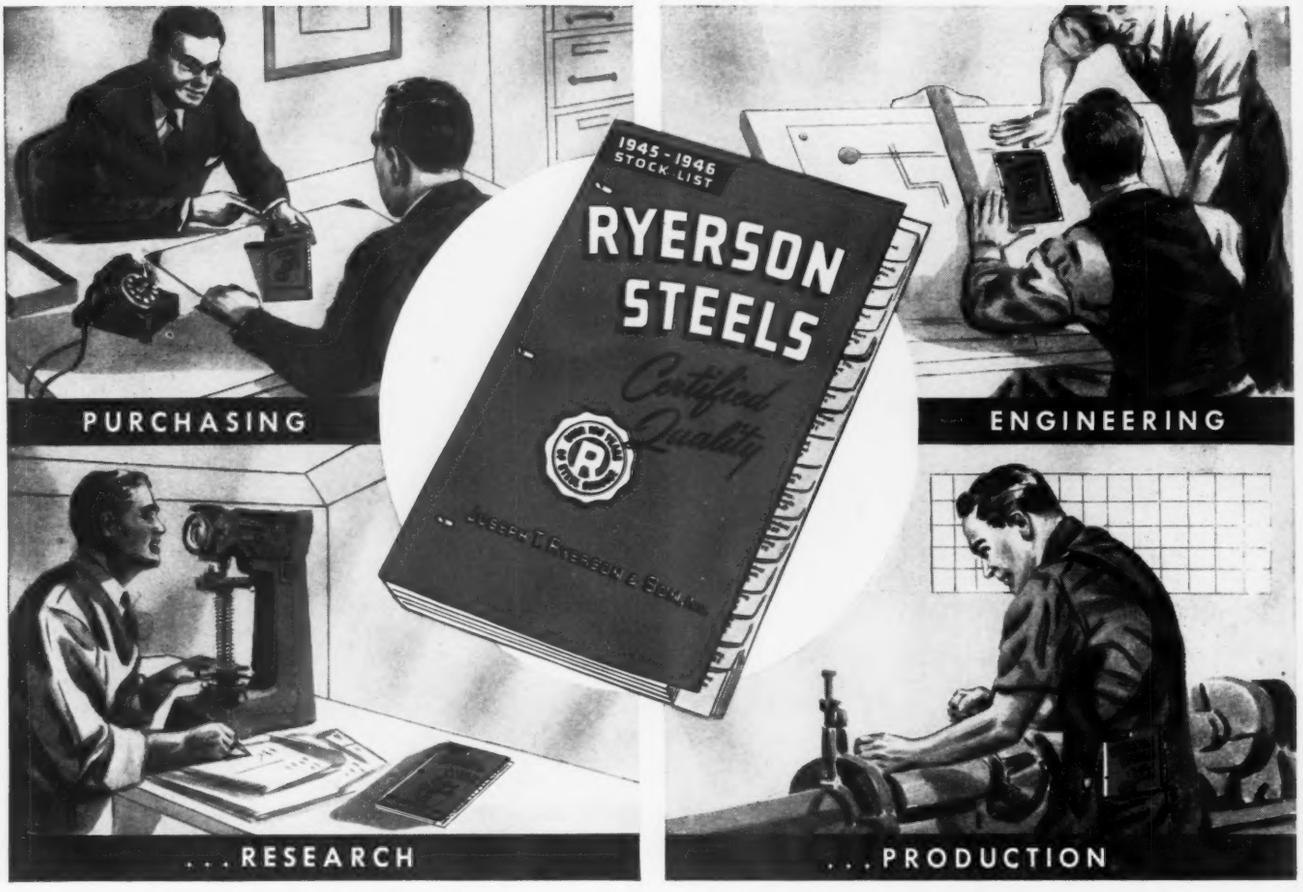
ALIGNMENT. Occasionally a machine gets out of line, or level. This will show up in the extra load which the motor is forced to carry until the condition is remedied. The first to discover the error is, quite often, the electrical crew. This crew has been trained to search for the cause of any overload which might develop and to report the existence of this overload immediately. In case the over-

(*Continued on page 204*)



Electrician using portable plating outfit. He is shown applying silver plating to copper contacts on 12,000-amp., 600-volt, air circuit-breaker.

Electrician making a running test on spinning frame. Note the recording wattmeter, recording voltmeter, and the totalizing meter. The bottom section of the box contains current transformer, leads, etc.



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RYERSON STEEL

Cross-Dyeing Socks Gives HEATHER EFFECT

HIGHLIGHTS: *Black and white cotton yarn dyed another color to achieve heather effect—Jordon Mills, Inc., knits 17-oz. bundles on 176-needle machines — Knitting yarns spun with twist multipliers of 3.35 and 3.50.*

A HEATHER EFFECT in cotton semi-dress socks is attained by Jordan Mills, Inc., Columbus, Ga., by cross-dyeing socks knitted of "mock-twist" yarn spun from one end of white and one end of black roving. When the socks are dyed one of the standard colors of brown, blue, gray, or teal, the white portion of the yarn assumes the standard color, while the black portion assumes a very dark shade of the standard color.

Trademarked "Jordane," the socks are knitted on a Scott & Williams HH automatic, 176-latch-needle, 3¾-in.-cylinder, 36-gage machine, operating at a cylinder speed of 204 r.p.m. Looping is done on a Wright Steady Dial looper.

Yarns used in making the heather socks are: heel and toe, two ends of 20s, spun with a twist multiplier of 3.50; top and body, a single end of 14s, spun with a twist multiplier of 3.35. The finished weight of the socks is 17 oz. per doz. pairs.

OPENING AND PICKING. All of the knitting yarn used by Jordan Mills is prepared at the mill. A 20-bale mix of ⅞-in. Middling cotton is laid down in the opening room and fed to a bale breaker. The complete sequence of opening equipment through which the stock is processed is as follows:

Bale breaker
Vertical opener
Centrif-air cleaner
Gyrator
Blending hopper
Centrif-air cleaner

If the stock is to be dyed, it is removed from the process between the gyrator and the blending hopper, re-baled, and dyed with a sulphur or a developed dye. When the dyed raw stock is ready for further processing, it is reentered in the opening line between the gyrator and the blending hopper.

The black and white 20s yarn which permit heather effects shows up noticeably on this spinning frame running in Jordon Mills.

The one-process pickers are run at the following beater speeds:

Back (three-blade) . . . . . 1200 r.p.m.
Middle (three-blade) . . . . 1200 r.p.m.
Front (Kirschner) . . . . . 1000 r.p.m.

The system employed for controlling stock throughout the manufacturing process is to run the cotton in mill lots, consisting of 1,000 to 10,000 lb. If a manufacturing order requires more than 10,000 lb., the total amount of stock is broken down into the usual lots.

Gray socks are looped and are then given a second inspection. White portions shown will be dyed a solid color.

DRAFT DATA. In producing yarn for knitting the heather socks and for manufacturing a number of other products which are standard with the company, the mill uses two-process drawing, equipped with metallic rolls, and Saco-Lowell model J-3 and model M roving frames. The complete drafting organization is as follows:

Picker lap (oz. per yd.)	15.5
Card production (lb. per hr.)	12.0
Card sliver (gr. per yd.)	50.0
Drawing sliver	50.0
Roving (hank)	
Model J-3	2.50 to 4.00
Model M	Up to 1.50
Yarn numbers	6.50 to 20.00

After being wound onto cones on a Foster winder, the yarn is placed in lattice boxes, covered with waterproof paper, and allowed to remain in the steam-conditioning room for 24 hr. The steam room is equipped with a Bahnson conditioner which regulates the amount of steam introduced into the room so that approximately 2½% additional moisture is taken up by the yarn. The mill has arrived at these steaming conditions as the most suitable for setting the twist and attaining a uniform amount of humidity in its yarn.

When the yarn is removed from the conditioning room, it is packed in cardboard boxes and stored until the knitting department is ready for it. Following the knitting operation and again following looping, the socks are inspected for defects.

A six-pocket Monel dyeing machine of 300-lb. capacity is used for cross-dyeing the socks to give the finished heather effect. Upon removal from the dyeing machine, the socks are placed in a 150-lb.-capacity Tolhurst extractor for the removal of excess water.

While wet, the socks are boarded on steel forms heated by steam to approximately 180 degrees F.

Fastness is Fashionable

Fastness and fashion go hand in hand. Brilliant colors are an inspiration to creative stylists. They serve, too, to answer the demands of the color-hungry public.

But color fastness is just as important as shade or brilliance. A color that fades or loses its brilliance has no place in today's fashions.

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Handling Methods Affect PICKER-ROOM FIRES

HIGHLIGHTS: *A diversion section below condenser allows burning cotton to be worked out with minimum fire loss—Cotton mills using ageing or storage bins had a loss per fire of 196% of the average—All sliver waste should be run through garnetting machine or picker section—Third-shift operation more than doubles total fire loss.*

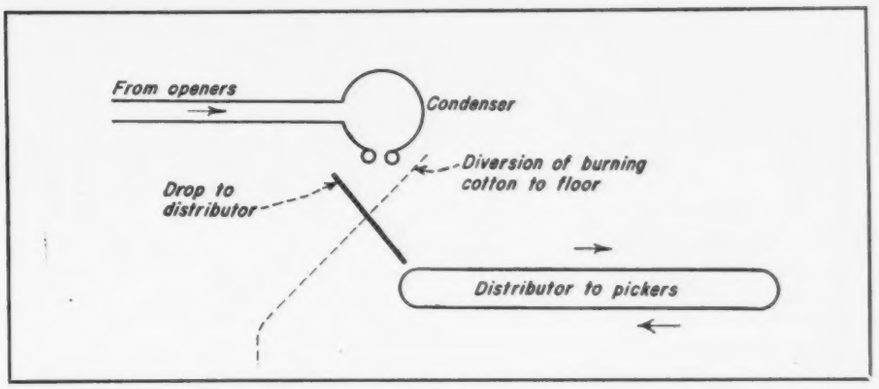

Fig. 1. A diversion section located under the condenser may be electrically controlled to discharge burning cotton to the floor rather than to the picker distributor.

By W. E. PETERSON

MORE COTTON-MILL FIRES originate in the opener room than in any other department of the mill; and many of these fires spread swiftly to the picker room. They are generally confined to the machinery and cotton, and the fire loss usually is governed by the extent of travel into picking equipment.

For these reasons, a large part of the Factory Mutual Fire Insurance Companies' survey of 212 Southern cotton mills was devoted to the study of methods which would reduce the extent of fire travel into picking machinery.

Most of the mills conveyed the cotton pneumatically from openers to pickers and fed the pickers by means of mechanical distributors. In a number of the larger mills, the discharge of several opener lines was connected to a single duct in order to obtain a more even supply of cotton and a greater flexibility of operation. As a rule, the one opener line fed three single-process pickers, and the average load per picker for all the mills was 285 lb. per hr.

Where a number of opener lines were connected together, the amount of fire loss increased in direct proportion to the amount of cotton handled by a single pneumatic conveyor. Consequently, to minimize fire possibilities it is good practice to convey cotton from each opener line through an independent duct and picker distributing system.

DIVERSION SECTIONS. Since the amount of fire loss is usually governed by the extent of damage within the picker room, operators should be notified promptly of a fire and the feed to the picker room should be immediately controlled. One method of control involves the use of a diversion section below the condenser. By discharging the burning cotton to a safe location on the picker-room floor, the mill can continue to operate the machinery during a fire and can work out the burning cotton with minimum damage to aprons and screens.

Inter-communicating alarms and electrically controlled diversion sections are used in some mills.

Fourteen percent of the mills cooperating in the survey used ageing or storage bins for cotton which had been conveyed from the opener room. For some reason, as yet uncertain, mills using bins had fewer fires than the average cotton mill, only 76% of the average number, but the loss per mill

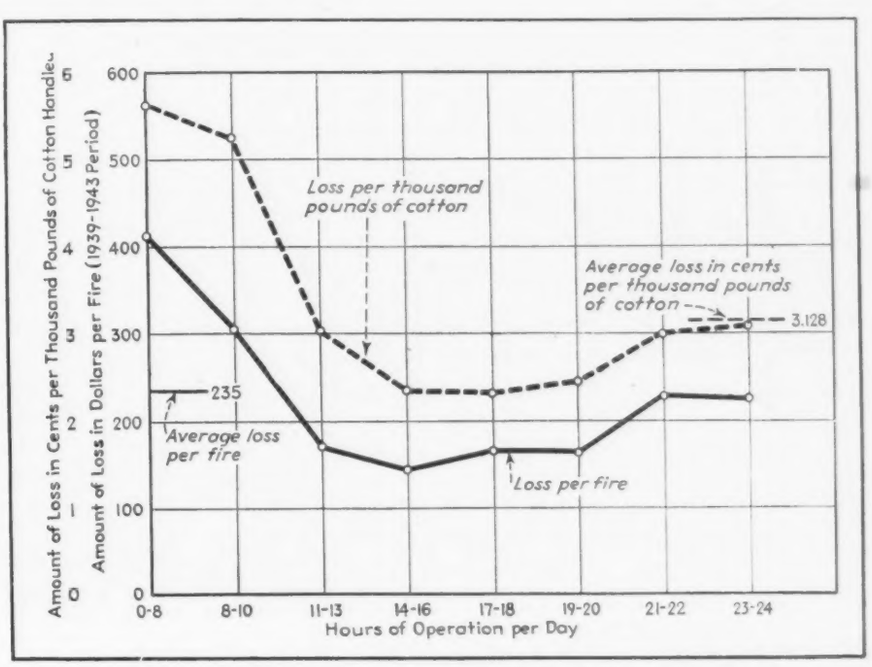

Fig. 2. The number of working hours greatly affect a mill's loss by fire.

(This is the second of a series of articles based on the report of the Associated Factory Mutual Fire Insurance Cos. The first article appeared in the January issue.—EDITOR)

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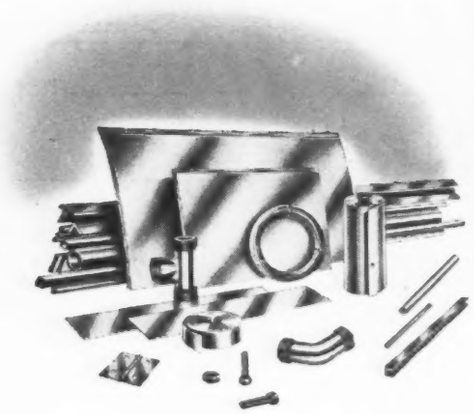

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amounted to 139% of the average, the loss per fire 196%, and the loss per pound of cotton handled 430%.

These statistics indicate that bin storage greatly increases the amount of loss in the picker room. Wherever bins are necessary, they should be limited to a capacity of 2000 lb., constructed of fire-resistive materials, and provided with waterproof floors and adequate drainage. There should be no interconnecting conveyor or other openings between bins.

The areas available for lap storage in the picker room have been greatly increased in most mills as a result of the change from three-process to one-process pickers. Unfortunately, in some picker rooms these areas are adjacent to the wall on which the electric control switches are mounted; and many serious fire losses have started from control switches in close proximity to lap-storage areas. Safely located switches of proper design and the subdivision of lap storage to groups of 100 laps should lessen the loss possibility. Laps which are not stored on trucks should be on platforms or skids to minimize possible damage by water.

DUST SYSTEMS. Until recently very little thought had been given to the proper collection and disposal of dust from condensers, pickers, and openers. Most systems reported by the mills utilized a metal duct conveyor for transferring the dust to a dust room under the mill. The room is usually a walled-off area unfit for other use; and it is generally characterized by low ceiling, irregular floor, and poor drainage.

A well-constructed dust room will decrease the amount of labor necessary in removing the collected dust. The room should be built of non-combustible materials throughout and equipped with floor drains wherever practicable.

Some mills have abandoned dust rooms altogether and have installed return-air filters and condensers to handle the opener- and picker-room dust. These devices give better control over dust-collecting, conserve heat, and enable the mill to provide humidity, which of itself has been a great aid in fire prevention.

The ducts connecting these systems should be dust-tight. They should be well supported and arranged so that combustible materials located near them will not be exposed to fires which may occur in the ducts. Suitable drainage should also be installed in these systems so that the filters may dispose of sprinkler water.

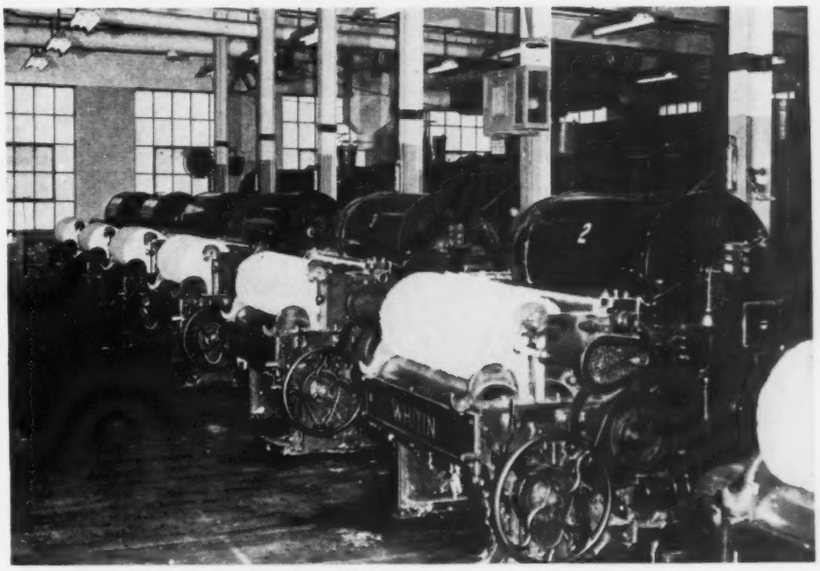
WASTE RECOVERY. The statistics developed by the mills on the various systems of waste recovery offer some interesting comparisons. These statistics, however, involve many variables and should be used to indicate trends rather than isolated facts.

Mills which returned garnetted waste and sliver to the opener line had 122% of the average amount of loss per pound of cotton handled. Mills which returned garnetted waste and sliver to the picker line had only 63% of the average amount of loss per pound of cotton handled. This would indicate that such waste should preferably be run to the picker line, if blending is possible at that point.

In mills where the feeders handling

(*Continued on page 220*)

Rocky Mount Mills Have Modern Picker Room



To illustrate the use of return-air condensers, discussed in Mr. Peterson's article, TEXTILE WORLD *has obtained these photographs of the modern picker room at Rocky Mount Mills, Rocky Mount, N. C. The pictures are presented through the courtesy of W. J. Laughridge, superintendent of Rocky Mount Mills. They are the first published pictures of a modern layout which has been much discussed in STA and other textile meetings. See also page 131 of the Dec., 1945, issue of* TEXTILE WORLD.—*Editor.*

industry needed it*...

B&A met the demand

POTASSIUM NITRITE KNO_2

Commercially Available in Tonnage Quantities

***THE STORY BEHIND POTASSIUM NITRITE**

The war was at its peak; the need, urgent. Key production hinged on having the laboratory chemical, Potassium Nitrite, in tonnage lots.

"It has never been made commercially. Can Baker & Adamson do it?" the customer asked. *B&A* accepted the challenge, placing the problem in the hands of its research and production experts. *The result:* For nearly a year *B&A* has been in full production on this new industrial chemical, meeting the customers' schedules, ton after ton, without fail!

Another example of B&A's ability to produce "custom made" chemicals on order for industry. Another example of the organization and facilities at your disposal when you bring your "special chemical" requirements to Baker & Adamson.

NOW Baker & Adamson brings Potassium Nitrite to American Industry in *commercial* quantities . . . once again meeting the demand to produce laboratory chemicals in tonnage lots!

Today for the first time this salt, with its invaluable properties as a heat-transfer medium, becomes available for large-scale industrial use . . . opening the way to a score of potential applications.

The special characteristics of this new *B&A* industrial chemical may provide the answer to your research or production problems. Investigate *now!* Baker & Adamson will be pleased to send you pertinent data and experimental samples—without any obligation—upon request to the nearest Sales & Technical Service Office below.

Setting the Pace in Chemical Purity Since 1882

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Division of GENERAL CHEMICAL COMPANY, 40 Rector St., New York 6, N.Y.

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Mill Prepared in Advance for Return of Its HANDICAPPED VETERANS

HIGHLIGHTS: *Alexander Smith & Sons used records of already-employed handicapped civilians to develop plan for handling handicapped war veterans —Found that lack of a limb or an eye did not prevent good performance on many jobs—Job specifications rechecked and training methods revised to assist handicapped worker—Program has attracted attention of veterans' groups and government agencies.*

By J. CLARK SAMUEL
Director of Public Relations, Alexander Smith & Sons Carpet Co.

A YEAR BEFORE V-J DAY, two men were in earnest conversation in the president's office of Alexander Smith & Sons Carpet Co. at Yonkers, N. Y.

The man sitting behind the big desk was Frederick B. Klein, president of the company, and the other man, Harold C. Zulauf, vice president in charge of industrial relations—then general superintendent of the mills.

Somewhere out in the Pacific that day, young Fred Klein, a lieutenant of Marines, was flying his B-25 Mitchell medium bomber on another hazardous mission. Out on Okinawa, Harold C. Zulauf, Jr., also a Marine lieutenant, was leading his men in battle, while his younger brother, Addison, was training in the States as a Marine fighting man.

The two older men sitting in the office at Yonkers had a great deal in common, and they were discussing a problem which at that time was giving headaches to many another mill head. Harold Zulauf, had been a Marine sergeant during World War I.

"How many men do we have in the service now?" Mr. Klein asked.

"Nearly fifteen hundred—and we've lost thirty-three," Mr. Zulauf replied.

"Are we going to be able to take care of them when they come back?" the president asked.

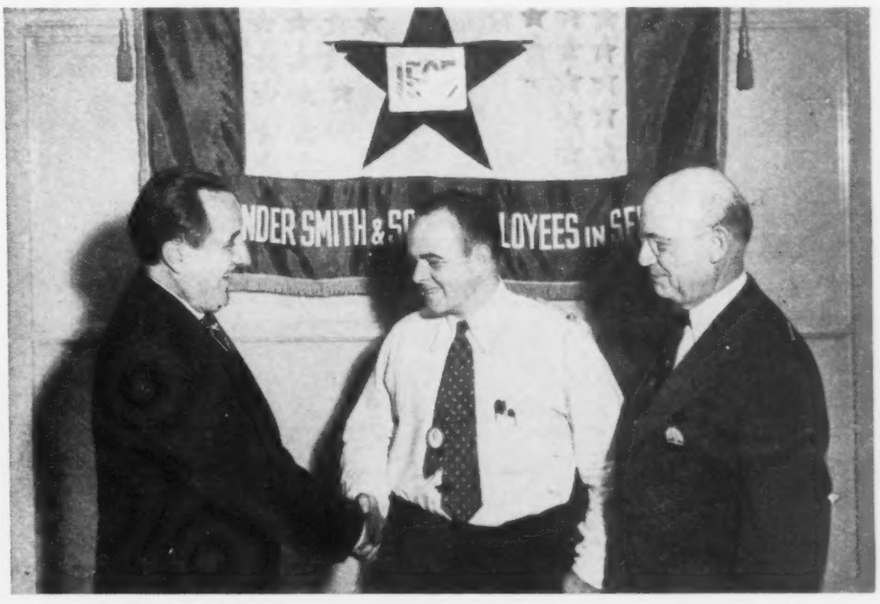
"Yes, that's all taken care of. But what worries me, is this: How about the Smith boys who come home with major physical handicaps? I remember after the last war there were thousands of boys who came back minus an arm or leg who were never given the opportunity to resume their places in the community. Employers didn't want them. They became discouraged. They felt they were being shunned by their fellow men. Many of them became community charges. We don't want that to happen with any of our employees."

Mr. Klein assented vigorously. "Zu—that's a problem for you to work out. Go to it!"

"And a problem I'll enjoy working out," Mr. Zulauf declared.

SUCCESSFUL REHABILITATION. That was the start of Alexander Smith & Sons' program for the rehabilitation of their returned, physically-handicapped veterans. Today, the program has proven a success and has attracted the attention of other manufacturers, veterans' groups, and government agencies.

Working with Laurence J. Dunn, personnel manager, Mr. Zulauf made a survey of the mills and found several persons with major physical handicaps. A quiet effort was made to employ other handicapped persons until a total of fourteen men were selected as "guinea pigs" for experiments. These men were placed on various jobs, and their efficiency was closely watched. For example, it was found that a man without



John P. Quinlan, technical sergeant in Army Air Corps and former tail-gunner on the famous bomber "The Memphis Belle", gets a solid handshake as he starts his foreman training from Harold C. Zulauf, vice president in charge of industrial relations, while Laurence J. Dunn, personnel manager, looks on. They are standing in front of the Alexander Smith & Sons service flag which indicates that 1,595 Smith men and women served in the armed forces during the recent war and 37 made the supreme sacrifice.

The Quality of Boger and Crawford knitting yarn is guaranteed —the highest tribute we can pay it. Signed . . . . . .

Fredericka Boger

BOGER and CRAWFORD ***PHILADELPHIA, PA.***

UTICA, N. Y. • BOGER CITY, N. C. • BOSTON, MASS. • CHICAGO, ILL.

a right hand could do good work on a certain operation requiring the use of only one hand.

With the assistance of the company's medical department, under Dr. R. H. Shanahan, medical director, all jobs in the mills were further surveyed, job specifications were rechecked, and training methods for some jobs were revised to assist the handicapped worker. Results have been eminently satisfactory. As a matter of fact, physically handicapped employees often do consistently excellent, above-the-average work because of their desire to show the world that their apparent handicap is no real handicap at all.

"The tests with civilian workers have shown that there are jobs which can be performed by people minus an arm or a leg," stated Mr. Zulauf. "The tests developed the fact that people suffering from paralysis, if properly employed can do a good job; and that the loss of an eye is not a great handicap to a worker scientifically trained and placed. While the testing of the handicapped civilian workers was in progress, they themselves did not know it was being done.

"Some handicapped employees in the Smith mills have been upgraded to the extent that they now occupy the position of supervisors. Promotions of this kind give encouragement to others physcially handicapped. The officials at the Smith mills believe that a disabled veteran can be fitted to a position that will aid his economic recovery; and to do this is not an act of charity, but a means for helping disabled veterans maintain their rightful pride and independence.

"From the moment the returned disabled veteran enters the personnel office until he is trained and placed on the job, he is treated as a normal person who wants to earn his living by his own effort.

"If the returned disabled veteran is not able to fill his old job he will be trained in a new job which may be indicated by one of a number of tests the company has developed to help place employees in jobs at which they will be happy.

"The company has a complete course in employee training which includes job-instructor training, methods training, and job-relations training, besides aptitude tests, all of which are available to the returned disabled veteran.

"At present there are handicapped workers on such jobs as spinning, card-fixing, threader's helpers, and many others, including section foremen. We have 31 employees with major handicaps working in our mills and every one is doing a very satisfactory job," Mr. Zulauf concluded.

In addition to making provision for physically handicapped veterans, the company and its medical department have succeeded in developing a program specially suited for veterans suffering from nervous disabilities.

VALUE OF PROGRAM. At the time of this writing, Alexander Smith & Sons were employing 451 veterans of World War II. In this group there are a number who have been wounded and received the Purple Heart. Fortunately, none of them suffered major handicaps.

However, the company had an opportunity to prove the value of its program in the case of a corporal who, because of a gunshot wound, suffered paralysis of the ulnar nerve of the left arm, restricting the use of two fingers.

In cooperation with the Cushing General Hospital at Framingham, Mass., an experiment in rehabilitation was made over a 90-day period, during which time the corporal was given official leave from the hospital. At the request of the Army hospital authorities, the corporal was placed in a job which required reaching, lifting, carrying, throwing, pulling, handling, fingering, and feeling. The job chosen for him which fulfilled most of the functions required was one calling for the oiling of motors.

In this job, the following functions are used: walking, climbing ladders and stairs, fingering oil can and grease gun, feeling bearings, carrying a ladder occasionally, carry grease gun and oil can, and reaching.

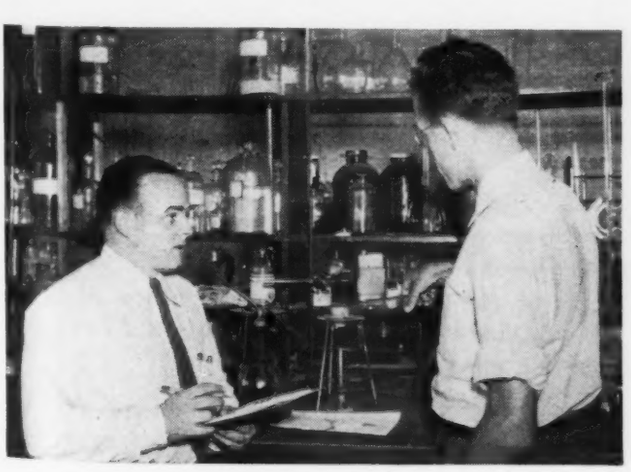
The corporal, who was a former Smith employee, began his new duties early last summer. He returned to the hospital several times for checks but now has been officially discharged and works every day. His work is efficient and the very nature of it is helping him to overcome his injury. In addition to the therapeutic value of his job, he is given "whirlpool" treatments in the company's medical department at regular intervals.

A survey of handicapped workers in the Smith mills has revealed the following: In the "minus" category—arm, 2; leg, 2; fingers, 22; eye, 5. In the "deformed" category—arm, 3; leg, 5; hand, 2; fingers, 5; body, 1. Employees who have suffered injuries—knee, 1; arm, 4; leg, 3; body, 1; fingers, 23; foot, 1; hip, 1; hand, 2; spine, 2.

In this group there are three hunchbacks, 13 deaf, 5 deaf-and-dumb, 19 lame, 3 with cardiac conditions, 1 with very poor eyesight, 7 with one eye sightless, 2 with speech impediments, 1 with a paralyzed hand, and 1 with arthritis.

It can be seen from the foregoing summary that many conditions which

(*Continued on page 23*)

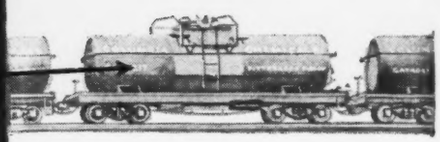


From Harold S. Dahlberg, chief of the Chemical Section of Smith's research laboratories, Johnny Quinlan takes notes as the chemist demonstrates some tricks of his trade.

Sergeant Quinlan learns all about raw wool used in the manufacture of carpets from Eugene Jordon, head of the wool storage department of Alexander Smith.

Less than 1 oz.

in *40 tons*



Laboratory perfection

in large-scale production of **CAUSTIC SODA**

The manufacture of numerous products requires Caustic Soda of utmost "purity"—that is with its metallic content, such as copper or iron, rigidly controlled. In the production of high-strength textiles, for example, the presence of as much as one ounce of these impurities in 40 tons of caustic may result in an inferior product!

Caustic Soda readily picks up such metals, however. To prevent contamination is relatively simple in the laboratory—but production on the vast scale required to meet huge industrial needs necessitates ingenious methods and infinite care in processing and handling.

The achievements in meeting exacting industrial standards—including the patented purification process for producing high grade diaphragm electrolytic Caustic Soda—are characteristic of Columbia operations. They are important reasons for entrusting your requirements for alkalies and related products to Columbia.

COLUMBIA CHEMICALS

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Soda Ash • Caustic Soda • Sodium Bicarbonate • Liquid Chlorine • Silene EF (Hydrated Calcium Silicate) • Calcium Chloride • Soda Briquettes
Modified Sodas • Caustic Ash • Phosflake • Calcene T (Precipitated Calcium Carbonate) • Pittchlor (Calcium Hypochlorite)

SCHEDULING PRODUCTION Saves Overseer's Time

HIGHLIGHTS: *Frames required on each yarn number figured from pounds per spindle per 40 hr. — Doffer's job based on percent of load represented by doffing one side — Frame efficiency quickly calculated from hanks, spindles, and yarn number.*

By F. H. GUNTHER and MARCUS GROSS

The authors, Marcus Gross (left) and F. H. Gunther inspect the stock card used for 27s filling. →

WITH the return of competition, spinning-production scheduling will have to be more effective than in either the competitive prewar period or the war period just completed, for the overseer of spinning will be faced with a combination of problems which were not present in either of the two past periods. The chief bugaboo will be the problem of obtaining maximum production from personnel under conditions of industrial relations which require more supervisory time and skill than formerly. Secondly, considerably more of an overseer's time will be devoted to quality requirements, in order to compete with other mills.

These combinations will reach a climax when the supply of consumer goods approaches the demand. At that time, quality will be as important as industrial relations and production; and the wise overseer of spinning should be planning now to systematize production scheduling, so that he can devote more personal attention to quality and personnel problems.

SCHEDULING. The basic factors of production scheduling in the spinning room are pounds, hanks, spindles run, and frames required. In order to gage these factors and to establish a method of control, the overseer normally would do the following:

1. Determine the pounds required to maintain looms.
2. Ascertain the pounds per spindle.
3. Find the pounds per frame.
4. Calculate the frames required to supply the looms.
5. Make periodic checks of frame production.

In instances where mills have centralized production control in the superintendent's office, some of the steps above will of course be outside the province of the overseer of spinning. Because items No. 2 and 5 offer the greatest opportunity for improvement, this article deals largely with them.

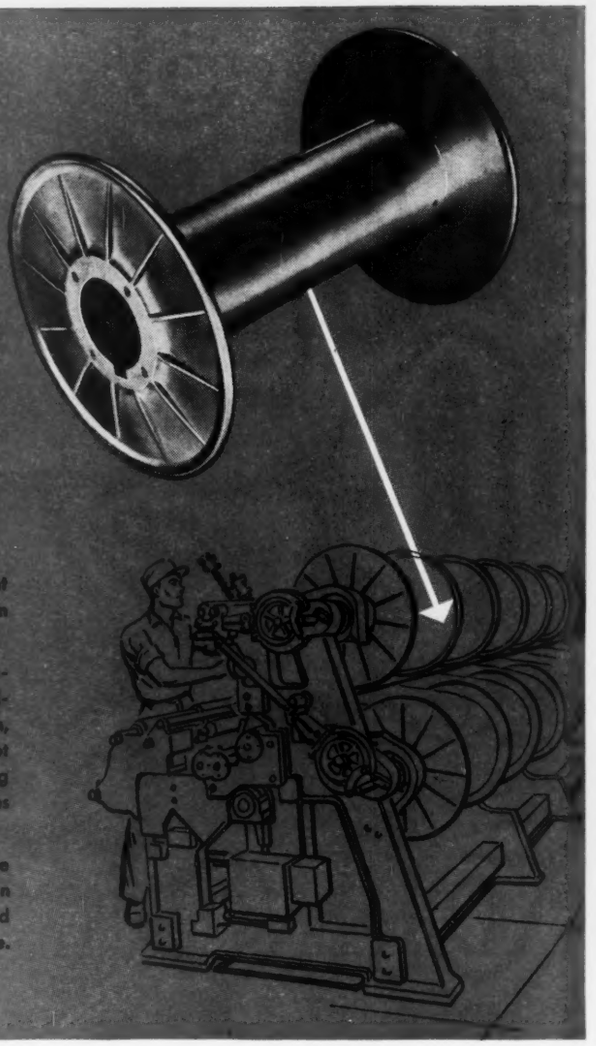
The pounds per spindle, frame capacity, and total frame layout should

Yarn	27s filling	Spdl. speed	9000
Combed — Carded		Roll speed	142
Stock	1"	Rail gear	50
Hank roving	3.50	Traverse	1 7/8"
Draft	15.43	Pick	7
Draft constant	737	Wind	Filling
Twist gear	74, actual 68	Traveler	#2 - 5/8c - 1F.
Turns per inch	18.00	Ring	1 3/8
Twist factor	3.53	Hanks 100%	34.86 @ 90%, 31.37
Twist constant	1341	Lb. 100%	258 @ 90%, 232
Motor pulley	15"	% production	90%
Cyl. pulley	15"	Doff interval	2 hr., 30 min.
		% 1 side-doff	5 %

Fig. 1. The complete data for scheduling an order of 27s filling is assembled on this card. Note the item "% 1 side-doff," which is used as a basis for calculating the doffer assignment.

boosting machine speeds —cutting costs

with magnesium warp beams!



Lightweight magnesium is doing a growing job in textile equipment today, and alert mill operators are making it pay dividends in speedier operations and reduced costs.

Take this magnesium warp beam. It's only one of the many magnesium parts that help cut inertia and contribute to perfect synchronization at higher and higher speeds. This beam has lightness, strength, rigidity, balance, and dimensional accuracy. On the job in tricot knitting mills, it means smoothness and precision in the knitting operation and reduced vibration in high speed warping. It means easier handling, too, and lower shipping costs.

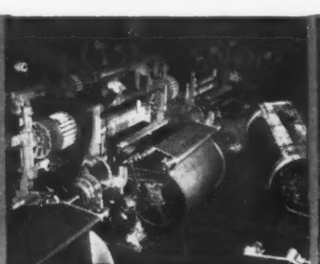
Rigidity superior to that of the former steel part is a feature of the cast magnesium head of this beam; the barrel is made from an extruded magnesium tube. Complete information on magnesium and technical aid in its application are available at the nearest Dow office.

Ready . . . to make products move!

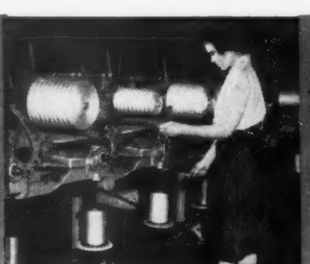
MAGNESIUM

LIGHTEST OF ALL STRUCTURAL METALS

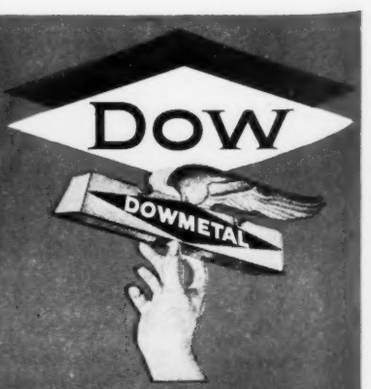
In looms, too, magnesium's lightness saves power, steps up speed, cuts vibration, and contributes to more uniform machine action.



Magnesium reduces maintenance resulting from failures commonly encountered in some loom parts made of nonmetallic materials.



High speed reciprocating parts of winding machinery are extensively made of magnesium in order to reduce wear and tear.



MAGNESIUM DIVISION • THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

Style 12999

Warp 30 R

Yarn 27s filling

R. p. m. fr. roll 142 T. p. i. 18.00 T. m. 3.53

Lb. per spindle 1.16 Eff. 90%

Sides per hand 10

Lb. per spinner 1160

Fig. 2. A second data card for 27s filling shows pounds per spindle, efficiency percentage, and pounds per spinner.

be simplified as much as possible. The data cards shown in Figs. 1 and 2, which the authors themselves use, will prove invaluable as a method of combining preliminary information before the work actually gets into production. These cards are self-explanatory and serve as permanent reference. Once the data card is completely filled in, the assignment of frames is comparatively simple.

Frames running on the various numbers should be recorded daily, and spindles run compiled weekly. Hanks per week should also be recorded, and actual pounds produced should be checked against "spindles run" and standard pounds for actual efficiency.

In order to find the "spindles run" for a 40-hr. basis, and thus effect some method of measuring machine performance, the weekly running report for 27s filling is shown in Fig. 3. The number of frames on this particular yarn varied from six on Wednesday to 11 on Friday. Based on a 40-hr. week and calculating 200 spindles per frame, the average spindles run by the first shift is 1680.

If the second shift ran the same, the total average spindles run on a 40-hr. basis would be 1680 x 2, or 3360 spindles. Using the standard pounds per spindle as worked out in Fig. 3, the standard pounds for the spindles run would be 3360 x 1.16, or 3897.6 lb.

FRAME EFFICIENCY. The standard pounds per spindle and the resultant 3897.6 standard pounds for the total spindleage are based on the 90% efficiency as listed in Fig. 2. The present efficiency allows for normal stoppage of the machine. For practical purposes, the 90% figure also represents 100% of production efficiency, and all actual production records are figured on that basis.

If 440 actual hanks were produced on 27s yarn within the 40-hr. period, the actual pounds would be

$440 \times 200 \div 27$, or 3259 lb.

The percent efficiency of the frames operating on 27s yarn would be

$3259 \div 3897.6$, or 83.62%

JOB ASSIGNMENTS. Of special interest on the data card shown in Fig. 1 is the "% 1 side-doff." This formula permits a quick calculation of doffer job assignment when a new yarn order is received.

If the doffer load is 32,000 spindles per week, the determination of the percentage represented by one side in the new assignment is easily calculated, as shown in Fig. 4. The calculation is based upon the frame running 2.5 hr. per doff.

The convenience of this formula is readily apparent when only a few frames of the given yarn number are running, as is frequently the case. In other words, if there were not sufficient frames to give a doffer a full job on this yarn number, the formula would be used to determine just what percentage of a full job the frames represented.

For example, with only 8 frames—16 sides—running on a given day, the doff task represents 16 x 5%, or 80% of a full job. This would indicate that the overseer should assign additional frames on another number in order to bring the task up to 100%.

Running report 27s filling Stock 1" R. Roving 3.50

	# Frames		Calculation:
	1st Shift	2nd Shift	40-hr. Basis — 200-Spindle Frames:
Mon.	8	8	8 X 200 X 8 = 12,800
Tues.	7	7	7 X 200 X 8 = 11,200
Wed.	6	6	6 X 200 X 8 = 9,600
Thurs.	10	10	10 X 200 X 8 = 16,000
Fri.	11	11	11 X 200 X 8 = 17,600
Sat.	—	—	—
		Total	67,200

$\frac{67,200}{40}$ = 1680 average spindles run, 1 shift 40 hr.

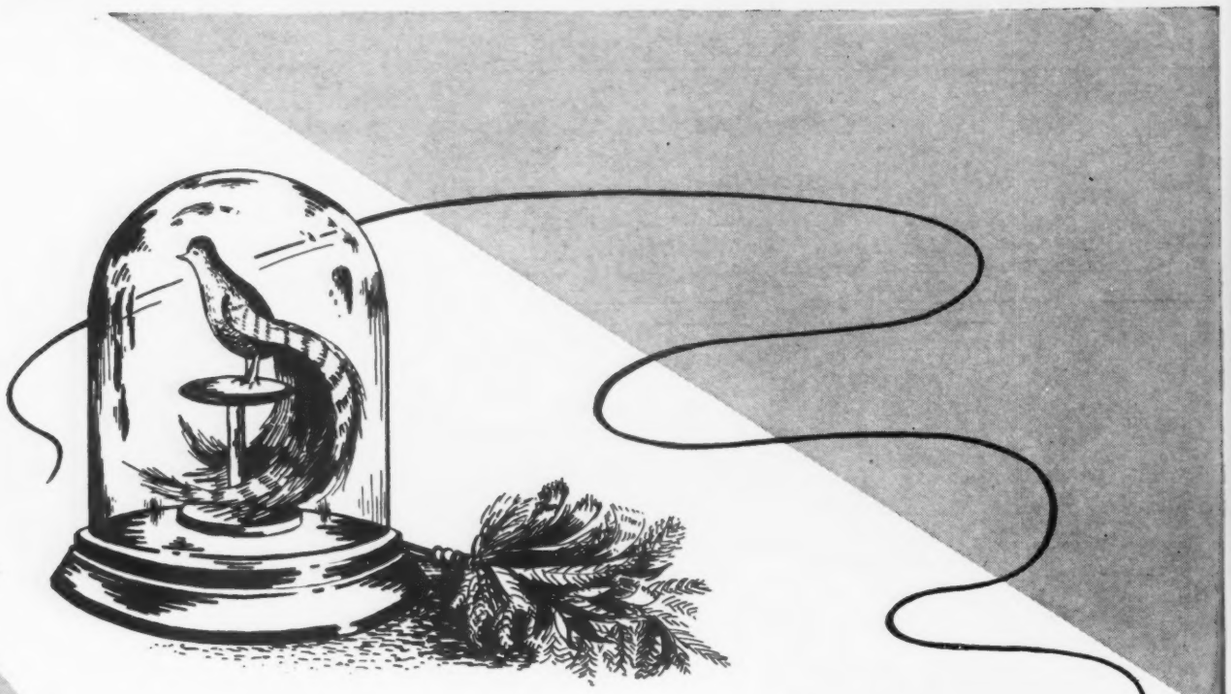
Fig. 3. The running report shown above is usually made out by the second hand. The spindles run are calculated for a one-shift, 40-hr. basis.

$$\frac{32,000 \text{ x } 2.5 \text{ hr. doff interval}}{40 \text{ hr. x } 100 \text{ spdls. per side}} = 20 \text{ sides per job}$$

$$\frac{1 \text{ side}}{20} = 5\% \text{ of a job}$$

Fig. 4. Finding the percentage of one side in a full doffer's task facilitates figuring a full job when the doffer is assigned frames involving several numbers of yarn.

Scheduling production on a 40-hr. basis is outlined in the accompanying article written by practical spinning-room men. Many mill men prefer to base their production schedules on other units than a 40-hr. shift. TEXTILE WORLD welcomes discussion on the method presented in this article and on any other system now being used by spinning overseers.—EDITOR.



From the days of the bell glass and bric-a-brac . . . .

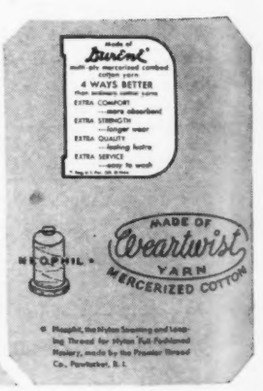
Never one to keep new developments "under glass", Aberfoyle was the *first* in America to construct and operate an automatic warp mercerizing machine. This was in 1899—just 10 years after the Galey weaving mill had been incorporated under the Aberfoyle name.

Wide expansion that has given Aberfoyle an international reputation, continuous research, new experience through wartime service and war-gained knowledge . . . all these are indications that Aberfoyle has taken advantage of every opportunity to improve the yarns it offers today. These yarns are returning to a greater demand —for they are even *finer than before.*

ESTABLISHED *1883*

Aberfoyle **Durene**

AMERICA'S OLDEST MERCERIZERS



ABERFOYLE MANUFACTURING COMPANY
123 South Broad Street, Philadelphia, Pa.

—and in the South
ABERFOYLE MANUFACTURING COMPANY
Belmont, North Carolina
Representatives in principal textile centers of the world

General view of exterior of restored New Salem carding mill and wool house. In the main structure is housed the card around which the mill operated. Shed at the rear covers the tread mill upon which walked the oxen, furnishing power for the mill. Photos by Job Conger

CARDING MILL Connected With Life of Abraham Lincoln

HIGHLIGHTS: *Early wool mill restored in New Salem village as part of Lincoln shrine — Original owner employed young Lincoln, but that he worked in mill is not established — Oxen later replaced by steam to drive mill.*

By CARROL C. HALL

A CARDING MILL has become an important part of a famous historical shrine. It is the Samuel Hill carding mill and wool house in the restored village of New Salem, Illinois.

Since 1932, the State of Illinois has been at work restoring this village—the place where Lincoln spent his young manhood. This month, as the 137th anniversary of his birthday is celebrated, there can be found at New Salem an entire pioneer community just as it was back in the 1830's.

Among the most recent of the restorations is the carding mill and wool house, the original of which was erected in the Spring of 1835 by Samuel Hill, then the leading business man of the village.

In a newspaper advertisement issued on Apr. 24 of that year, Hill stated that he would commence carding on May 1. He described his mill as follows: "The machines are nearly new and in first rate order, and I do not hesitate to say the best work will be done."

Hill's carding machine was powered by oxen, which walked on a circular treadmill which was inclined at an angle. The big wheel was about 40 ft. in diameter. The gearing of the tread to the machine was of hickory wood, solid and substantial.

A contemporary of the period, writing years later, told of the operation of the mill: "The people of New Salem commenced bringing wool in May, and in June the building would be full. It was amusing to see the sacks of all sorts and sizes and sometimes made from old petticoats.

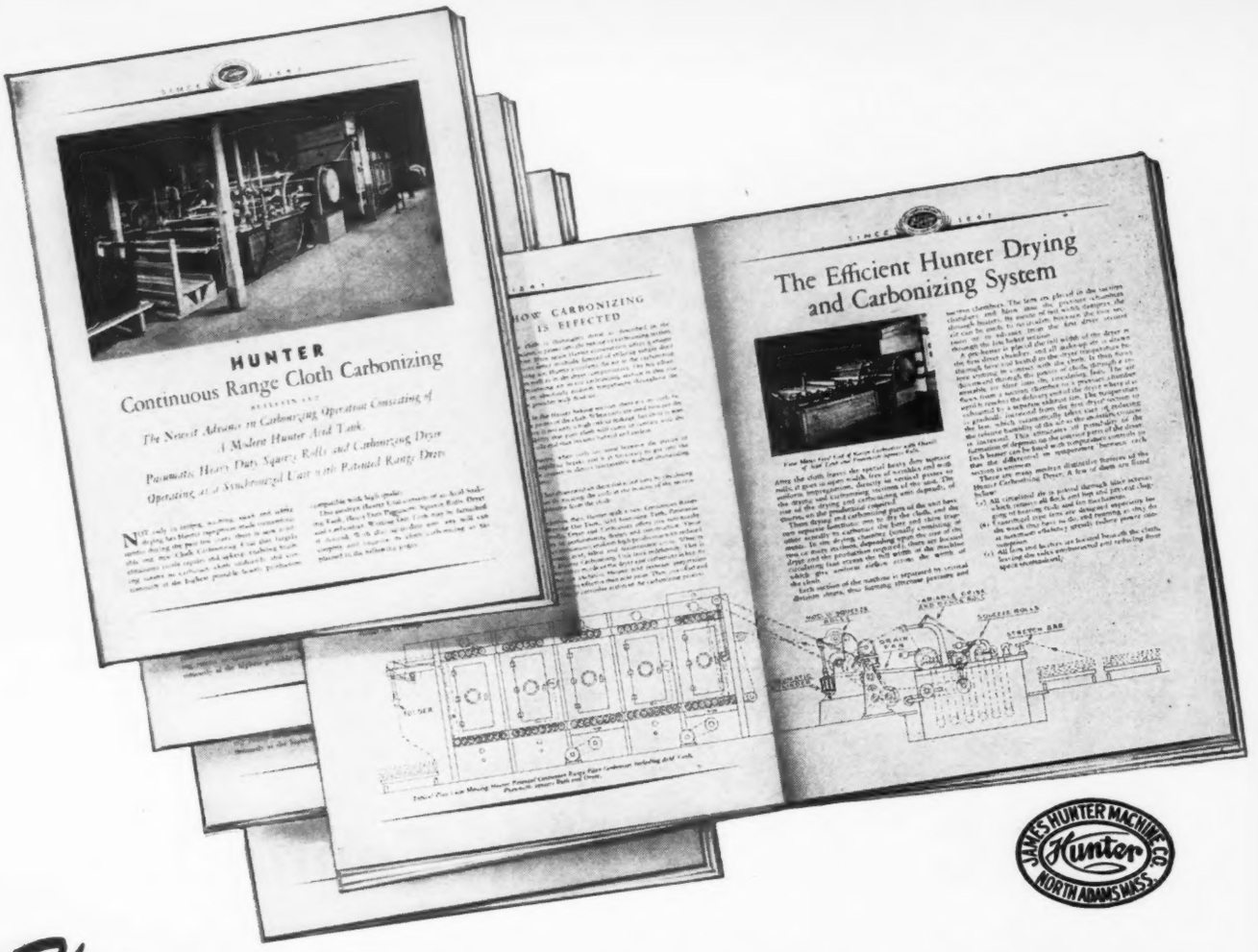
"For every ten pounds of wool, customers would bring a gallon of grease, mostly in old gourds. Large thorns were used to pin the packages together."

At the mill the wool was carded into "cones", which were kept in a special storeroom until the growers came to take them home. From these cones the women spun their yarn, and the cloth was woven at home.

Although some of the mill's business was done on a cash basis, most of it was by "toll". That is, the miller extracted part of the wool as his fee.

LINCOLN'S CONNECTION. When Lincoln arrived in New Salem in 1831, Sam Hill had already been there for two years. At that time, he was operating a general store and sometime later was the village's first postmaster. Afterward he was succeeded in that office by young Lincoln.

The lives of Hill and Lincoln were closely associated. It is well established


HUNTER
Continuous Range Cloth Carbonizing
The Newest Advance in Carbonizing Operation Consisting of
A Modern Hunter Acid Tank,
Pneumatic Heavy Duty Squeeze Rolls and Carbonizing Dryer
Operating as a Synchronized Unit with Patented Range Drive
HOW CARBONIZING IS EFFECTED
The Efficient Hunter Drying and Carbonizing System

How TO PIECE CARBONIZE WITH CONTROLLED TENSION AND WITH NO LOSS IN WIDTH OR WEIGHT—AT HIGH SPEEDS

We cordially invite you to write for the new brochure pictured on this page. It will tell you how Hunter offers any mill the newest advantages in carbonizing equipment with performance pre-tested and production guaranteed and cost determined before you install the equipment.

It will tell you how this modern unit, consisting of a lead lined Acid Tank, Pneumatic Heavy Duty Squeeze Rolls and Carbonizing Dryer, operates as a synchronized unit with patented range drive.

It describes in complete detail the new Hunter Patented Range Drive which affords you these important aids to the salability of your fabric:

a. Uniform tension on goods throughout the unit.

b. Complete elimination of impaired tensile strength.

c. Complete protection against streakiness and marked surfaces on face finish goods.

d. No tendering of cloth in seams or anywhere in the piece.

e. Absolute guarantee against building up of slackness and undue tension in the unit.

This new 8-page bulletin will be a valuable addition to your technical files. A request from you on your letterhead will bring the brochure by return mail with absolutely no obligation on your part.

JAMES HUNTER MACHINE CO.
NORTH ADAMS, MASSACHUSETTS, U.S.A.
FOUNDED 1847

that for a time Lincoln (who was 22 years old when he came to the village) clerked in Hill's store.

Since Hill was active in business and his enterprises afforded some employment—seasonal perhaps—there can be no question that at other times Lincoln worked for him, possibly during some of the mill operations.

Later when Lincoln started a store himself, he and Hill were for a short time business rivals; but it has not been proved that Lincoln worked in Hill's carding mill.

In 1835, Hill married Parthena Nance who had been given her name by Lincoln when she was still a girl. He told her parents, who gave him that honor, that it was "a right pretty name."

It is very probable that Hill and Lincoln, being of much different temperaments, were not intimate in their acquaintanceship but rather are to be remembered as New Salem contemporaries. Hill was a Democrat, for example, and received his postmastership by appointment from Andrew Jackson.

STEAM POWER. It is altogether likely that this mill was one of the first steam-powered units in Central Illinois. The boiler came from a river boat which had stranded near the town.

Strangely, the life of New Salem village and the days of Hill and Lincoln in residence there are almost parallel. By 1841 the village was abandoned. For nearly a century following it was only a memory.

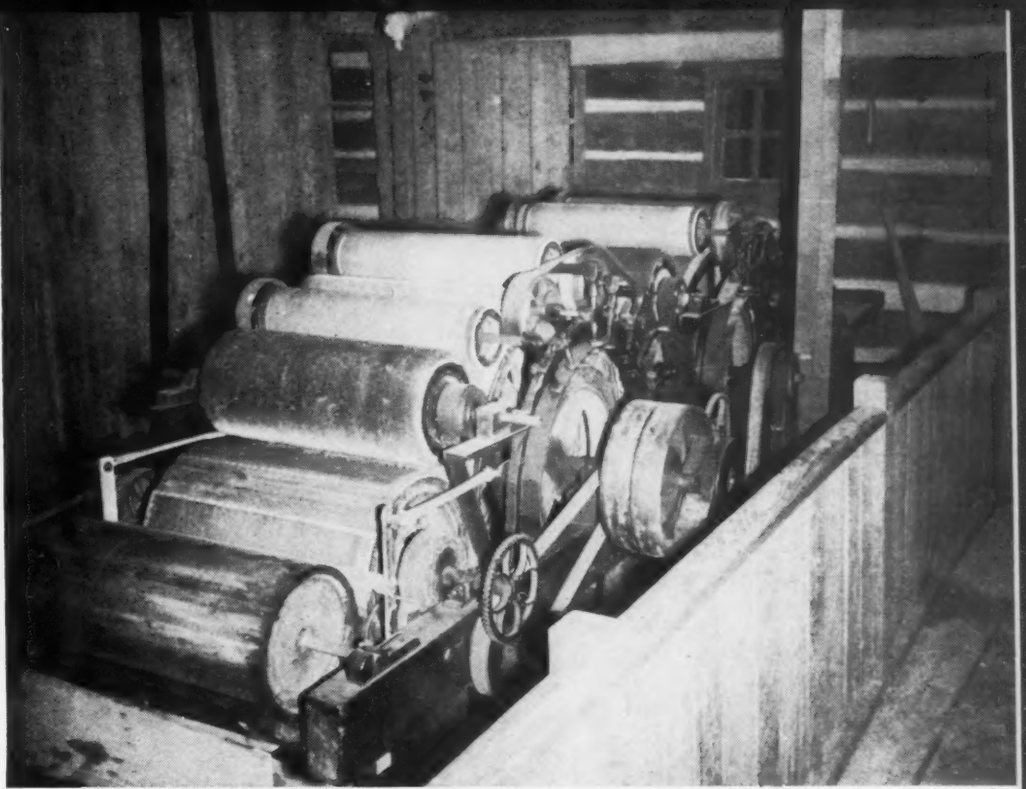
New Salem was never a large village. There were perhaps 15 cabins, shops, stores. The population was never over 110 people. Yet, it was in this tiny, pioneer hamlet that Lincoln found himself.

Historians are prone to give the residents of New Salem much credit for their respective parts in the development of the young Lincoln.

Extensive research was required in the restoration of the mill and wool house. After the foundations had been established by excavating, recollections of old-timers were obtained and extensive study made of mills of that era.

The machine now housed in the restored mill is a double carding machine built by Schofield Brothers and used in Byfield, Mass., in 1804. The machine is approximately the same age as the one probably used in the original carding mill.

The engineering of the mill and treadmill are in keeping with the times in which they were used. It is planned to operate the mill for short periods, when conditions permit, so that visitors to the shrine can have a more realistic view of the past.



Carding machine in Sam Hill's carding mill and wool house in restored New Salem. Door in rear center leads to storage room where the "cones" of wool were kept.

The New Salem carding mill was powered by oxen. Shown in foreground is the ramp by which the oxen were led onto inclined circular tread mill. Plans are being made to run the mill for short periods to demonstrate to visitors how manufacturing took place in the 1830's.

Power mechanism of the New Salem carding mill and wool house. The cogs in the right foreground are from the tread mill above on which the oxen walked. The shaft leads to the gears (wood, leather, metal) which operate the card above.

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Specialization Cuts Costs in PACKING and SHIPPING Hose

HIGHLIGHTS: *Pairer is often expected also to inspect and sort, which requires more than average versatility —Some mills have one girl grade, pair, tack, label, fold, and bundle— Most efficient plan is to divide labor, with operatives working at conveyor belt which moves intermittently.*

By **JULIAN W. HUGHES**

IN THE HOSIERY INDUSTRY when times are normal, knitting operations are fairly consistent the year around. The various styles are knitted and stored in the gray-goods room to await orders from the shipping department. In the finishing and shipping departments, the flow of goods surges and ebbs with seasonal demand. Preparing hosiery for shipment in the most efficient manner, with minimum of time, effort, and storage space, has not in the past received as much thought as it deserves.

After hosiery has been boarded, it is usually trucked to the pairers, by whom the first step in preparation for shipment is made. Pairing involves more work than the term implies. At the pairing table, the operative inspects not only for slight differences in shade but also for reboards, redyes, and mechanical defects that escape the sharp eyes of the gray-goods inspectors. Pairing requires close observation, for every detail of the pair must match, as well as merely the length and shape. This operation is actually both inspecting and pairing, and involves a multitude of responsibilities. In some mills, in addition to these responsibilities, the pairer has to mend runs and holes that have been overlooked by the gray-goods inspectors.

USUAL PAIRING. The usual method of pairing is for the operatives to sit on posture stools at tables (generally homemade) about 30 in. high and 3 ft. square. The top is either dressed off smooth and well-shellacked, or finished with a smooth enamel surface to prevent snagging of the hosiery fabric. Such a surface also is easy to keep clean, which condition protects the merchandise against chance of getting soiled. Sometimes the pairing tables are strung along the windows at the north side of the building. A more popular arrangement, especially in larger plants, is crosswise in line with windows, and doubled; that is, two tables are joined with two operatives facing each other. A semicircle is often cut out of the edge of the table so that the operative sitting there can more conveniently reach any part of the table.

A lot from the boarding room is placed on a stand at one side of the operative, and another stand is provided on the other side of the operative on which to stack the units paired in groups of one dozen. The pairer looks over both sides of each piece carefully for quality and she grades as she runs through each dozen, casting reboards (if any) in one pile, redyes and off shades in another pile, hose with runs or small holes in still another pile. She arranges parallel on the table before her, stairway fashion, all hose that can be matched. From this "spread", she coordinates the pairs, counts out 12 pairs

(*Continued on page 198*)

Kaumagraph Co.

Hand application of dry transfers for hosiery at Rex Hosiery Mills, Philadelphia

For a cleaner textile world . . .

SULFRAMIN DT POWDER*

In a world that grows cleaner day by day, textile mills are depending more and more upon the chemical magic of Sulframin DT. For Sulframin DT is an unusually efficient detergent; and is very economical besides.

Chemically classified as an alkylaminosulphate, Sulframin DT functions effectively in almost every phase of boiling off and drying procedure. As an emulsifier and foaming agent it performs ideally; it dissolves readily and blossoms into rich suds even when diluted by ten thousand parts of water. Equally important, the efficiency of Sulframin DT isn't lessened when used in hard water.

Moreover, Sulframin DT is unaffected by the presence of lime and magnesium salts; it resists both acids and alkalies; and even after long storage, it does not deteriorate. Sulframin contains no soap; consequently rancidity and stains —so common when soap is used as the emulsifier —no longer present a textile problem. And in the dyeing industry concerned with processing rayons and acetates, the thorough dispersing qualities of Sulframin DT are utilized to particular advantage.

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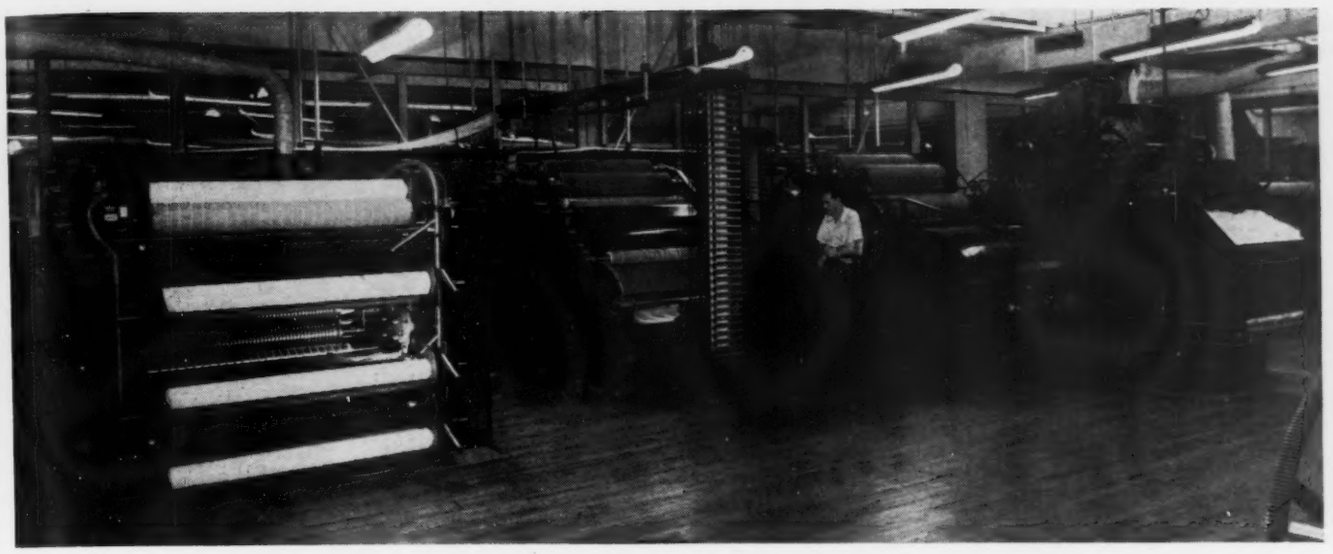


Two-card sets can be used for carding staple rayon on the woolen system, thereby eliminating at least one card from the usual woolen set.

—RAYON ON WOOLEN SYSTEM—

LESS CARDING Required For Rayon Than for Wool

HIGHLIGHTS: *Variation in weight of roving is problem—Cover plates used on fancy roll to control air currents—Light-weight spools needed for roving when yarns finer than 3 run are wanted—Finer yarns made with rayon than with wool.*

By J. T. DRENNEN and T. A. BOSWELL
Textile Research Dept., American Viscose Corp.

EXTENSIVE CARDING, as required for wool, is not necessary for rayon staple. It is quite practical to use a two-card set in place of the usual three- or four-card set used for fine wools. Also it is possible to produce fine rayon yarns using deniers finer than the finest wools without the lower production that is necessary for wool. Higher production is maintained in rayon carding because of the aforementioned reasons and because the necessity for stripping is lessened. Other advantages of rayon over wool are that it contains no vegetable matter and is free of tangled masses of short fibers.

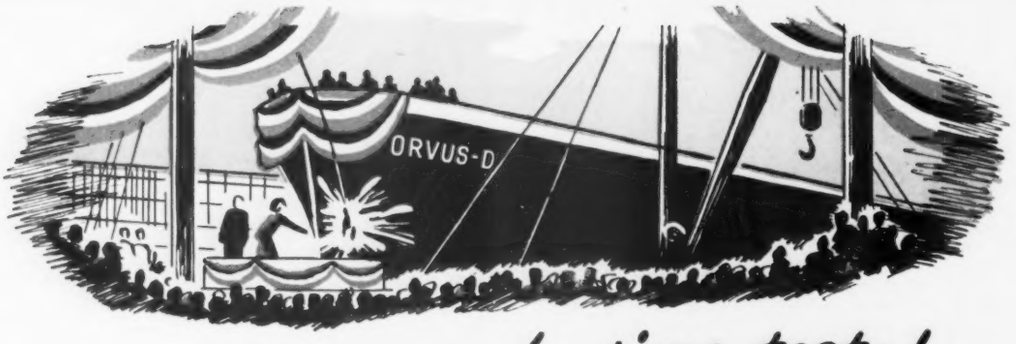
CARDING PROBLEMS. However, it is not to be assumed that rayon carding is without its problems. One of the first problems to present itself was that of variation in the weight of the roving from one side to the other, across the card. Tests showed that on a roving weighing 102 gr. per 50 yd., the weight varied as much as 26 gr. from center to side.

The preliminary step toward solving this problem was to check the fly being kicked back on the finisher card feed table. It was found that the tumbler was not delivering the stock to the main cylinder properly but was carrying some of the stock around to the back fancy, which created sufficient draft to cause the fly to pile in the center of the feed. Changing the tumbler clothing from a low-bend wire to a high-bend wire solved this problem of fly completely, but only helped slightly to eliminate the variation in the roving.

While further checking for possible cause of the trouble, it was noticed that a considerable vacuum was created by the fancy at the triangular space below the fancy between the doffer and main cylinder. Blocking this space with a specially designed fancy cover prevented the fancy from drawing air in from the sides and pulling the stock to the center, thus causing the roving from the center of the card to be heavy. With this change, the variation was all but eliminated and left only normal adjustments to be made on the card. From the past experience, it was known that the setting of the fancy controlled the delivery of the stock to the doffer. Therefore, setting the fancy deeper into the cylinder leveled the delivery across the card.

The solution of the problem of varia-

For operations in spinning rayon on the woolen system that precede those described here, see December and January issues of TEXTILE WORLD.



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*"Orvus" is the trade mark used by Procter & Gamble to identify one of its hymolal products.

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tion by this method may bring with it a new and troublesome situation. The setting of the fancy deeper into the cylinder may cause fly, in flake form, to be thrown out of the top of the fancy cover onto the cylinder and thus creates uneven roving. If this is encountered, the variation may be eliminated by changing the setting of the fancy from $\frac{3}{16}$ in. into the cylinder to $\frac{1}{16}$ in. into the cylinder and increasing the speed by 20% to compensate for the lighter fancy setting.

Common reasons for changing the setting of the fancy are:

1. Loading up of the cylinder—to correct such a condition a heavier fancy is necessary. If this does not completely correct it, a 20% increase in speed of the fancy will prove very helpful.

2. Excessive fly being thrown by the fancy—here a lighter fancy and/or less speed is the answer.

3. Roving running heavy in the center of the card—this can be evened out by a heavier fancy or by increasing the speed, or both, depending on the amount of variation. Use both if the variation is great or just a heavier fancy if the variation is slight.

4. Roving varying from left to right across the card—here a lighter fancy, or decreased speed, or a combination of both should be used, depending on the amount of variation in the roving.

SETTING FANCY ROLL. Following is the method worked out for setting a fancy and is the one now in use in our woolen department. When first setting up a card, the fancy should be set to the cylinder on each side with a No. 34 gage. From this point, the top adjustment nut on each side should be brought up two faces. This will set the fancy approximately $\frac{1}{16}$-in. into the cylinder, exactly the same on both sides. If a heavier fancy is required, the top adjustment nut should be brought up one or two faces more on each side, and the reverse if a lighter fancy is called for. This system has been found to be both simple and accurate, and eliminates the danger of errors when setting by ear, or other methods.

Regarding the fancy cover, there are

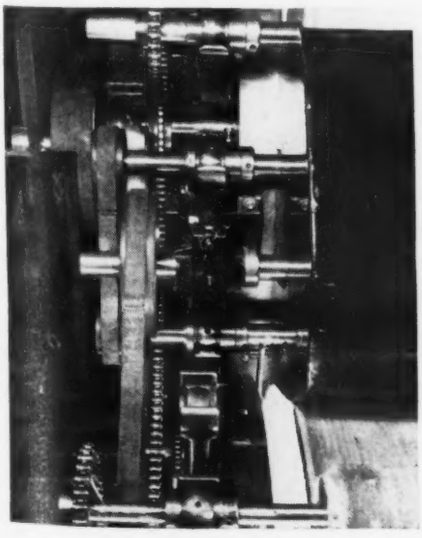
(Continued on page 242)

TABLE IV—DETAILS OF WOOLEN BREAKER CARD

	Dia., Inches	Circum. on Wire	Wire Number	Foundation	Typical Operating Set-Up		
					Gage	R. P. M.	Inches per min.
Feed Rolls	2-5/8	9.82	Metallic	4 threads interlocking	28	1	9.82
Licker-in	9-7/16	31.42	Metallic	4 threads interlocking	28	25	785.50
Lump Roll	4-1/4	14.92	Metallic	10 threads, hardened points, surface wind	24	25	373.00
Breast Cylinder	25	79.32	Metallic	12 threads, hardened points, surface wind	28	51	4045.32
1st Stripper	3-1/8	10.60	Metallic	12 threads, hardened points, surface wind	28	128	1356.80
1st Worker	6-3/8	20.81	Metallic	12 threads, hardened points, surface wind	28	7.50	156.07
2nd Stripper	3-1/8	10.60	Metallic	12 threads, hardened points, surface wind	28	128	1356.80
2nd Worker	6-3/8	20.81	Metallic	12 threads, hardened points, surface wind	28	7.50	156.07
3rd Stripper	3-1/8	10.60	Metallic	12 threads, hardened points, surface wind	28	128	1356.80
3rd Worker	6-3/8	20.81	Metallic	12 threads, hardened points, surface wind	28	7.50	156.07
Tumbler	14	46.72	24/30s	D.C. 6-ply Flexifort	30	112	5232.64
Cylinder	60	191.21	26/30s	D.C. 6-ply Flexifort	..	72	13767.12
1st Stripper	2-3/4	11.39	26/30s	D.C. 6-ply Flexifort	28	360	4100.40
1st Worker	8	27.88	26/30s	D.C. 6-ply Flexifort	28	7.50	209.10
2nd Stripper	2-3/4	11.39	26/30s	D.C. 6-ply Flexifort	28	375	4271.25
2nd Worker	8	27.88	26/30s	D.C. 6-ply Flexifort	28	7.125	198.64
3rd Stripper	2-3/4	11.39	26/30s	D.C. 6-ply Flexifort	28	360	4100.40
3rd Worker	8	27.88	26/30s	D.C. 6-ply Flexifort	28	7	195.16
4th Stripper	2-3/4	11.39	26/30s	D.C. 6-ply Flexifort	28	360	4100.40
4th Worker	8	27.88	26/30s	D.C. 6-ply Flexifort	28	6.75	188.90
5th Stripper	2-3/4	11.39	26/30s	D.C. 6-ply Flexifort	28	360	4100.40
5th Worker	8	27.88	26/30s	D.C. 6-ply Flexifort	28	6	167.28
6th Stripper	2-3/4	11.39	26/30s	D.C. 6-ply Flexifort	28	360	4100.40
6th Worker	8	27.88	26/30s	D.C. 6-ply Flexifort	28	8	223.04
Fancy Stripper	1-7/8	9.03	26/30s	D.C. 6-ply Flexifort	28	620	5598.60
Fancy	9-3/4	38.48	26/28s	Low bend leather (pressed point 3R., 3T., 3N)	..	520	20009.60
Fancy Stripper	2-3/4	12.17	30s	6-ply Cotton	24	620	7545.40
Doffer	36	115.84	26/30s	D.C. 6-ply Flexifort	28	7.75	898.26
Dickey	3-3/8	14.53	30s	6-ply Cotton	34	7.75	126.00
Doffer Comb	.....	.....	.....	.....	30	1450	.....

TABLE V—DETAILS OF WOOLEN INTERMEDIATE CARD

	Dia., Inches	Circum. on Wire	Wire Number	Foundation	Typical Operating Set-Up		
					Gage	R. P. M.	Inches per min.
Feed Rolls	2-5/8	9.42	5 thread	No. 526U11	28	2.75	25.90
Licker-in	4-1/2	16.10	15/24s	Leather	30	240	3864.00
Back Fancy	3	15.70	28s	Leather	28	495	7771.50
Tumbler	9-1/16	31.43	28s	Flexifort	30	175	5500.25
Cylinder	60	190.19	30/34s	D.C. Flexifort	..	72	13693.68
1st Stripper	2-3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
1st Worker	7	24.74	30/34s	D.C.Flexifort	30	6.75	166.99
2nd Stripper	2 3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
2nd Worker	7	24.74	30/34s	D.C. Flexifort	30	6.25	154.62
3rd Stripper	2-3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
3rd Worker	7	24.74	30/34s	D.C. Flexifort	30	5.875	145.34
4th Stripper	2-3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
4th Worker	7	24.78	30/34s	D.C. Flexifort	30	5.25	129.88
5th Stripper	2-3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
5th Worker	7	24.78	30/34s	D.C. Flexifort	30	5.125	126.79
6th Stripper	2-3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
6th Worker	7	24.78	30/34s	D.C. Flexifort	30	5	123.70
7th Stripper	2-3/4	11.38	30/34s	D.C. Flexifort	30	430	4993.40
7th Worker	7	24.78	30/34s	D.C. Flexifort	30	4.875	120.60
Fancy Stripper	1-7/8	9.03	30s	6-ply Cotton	28	600	5418.00
Fancy	9-3/4	38.48	28/30s	Low Bend Leather pressed 3R., 3T., 4N.	..	510	19624.80
Fancy Stripper	2-3/4	11.78	30s	6-ply Cotton	24	600	7068.00
Doffer	36	115.82	30/34s	D.C. Flexifort	28	6	694.92
Dickey	3-3/8	13.74	30s	6-ply Cotton	34	8	109.92
Doffer Comb	.....	.....	.....	.....	30	1410	.....



The special end-plate required to enclose the fancy when carding rayon staple is shown in normal working position.

CONTROLLED FEEDING OF PEROXIDE IS EASY

Whether you use the kier, cold, machine, package or continuous steam method of bleaching, Becco hydrogen peroxide is very easy to handle. Shipped in drums or tank cars, it is pumped directly to the point of use. The actual feeding of the peroxide is automatic and fully controlled through use of proportioning pumps. The use of Becco hydrogen peroxide thus reduces labor as well as hazards.

As the result of many years of specialized bleaching experience, Becco's engineers and chemists are qualified to give valuable advice on bleaching. Why not ask them to advise what system is most suitable for your operations, whether it be cotton, wool, knit goods, rayon or other natural and synthetic fibres. They will tell you, too, at what stage of production the bleaching should be done or is most suitable. This bleaching "know-how" can now be yours, free. Write to:

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15	16	31	32	47	48	63	64	79	80	95	96
13	14	29	30	45	46	61	62	77	78	93	94
11	12	27	28	43	44	59	60	75	76	91	92
9	10	25	26	41	42	57	58	73	74	89	90
7	8	23	24	39	40	55	56	71	72	87	88
5	6	21	22	37	38	53	54	69	70	85	86
3	4	19	20	35	36	51	52	67	68	83	84
1	2	17	18	33	34	49	50	65	66	81	82

Gear layout _____ Please change frames # 17-32
Cotton B Order 1025 Yarn # 13.00 Twist 4.50 Hank roving 1.20
Date 1-28-46 James Smith
Superintendent

Fig. 1. The above form, showing the frame layout in the spinning room makes quick visualization of the room possible. It is convenient for change orders and other reports, and it also aids in laying out spinners' and doffers' jobs.

Warper-Beam Production By Orders

Style 12/3/3 Yarn # 12.00
Customer Dunn Beams ordered 426

No. beams to make	Made	Date	Shift
426	3	1/28/46	1
423	2	"	2
421	3	1/29/46	3
418	2	"	1
416	3	"	2
413	3	1/30/46	3
410	2	"	1
408			

Fig. 2. The beam inventory above, which gives up-to-the-minute facts on actual production of an order, is widely used by yarn mills.

Mill Overseers Use Unique SPINNING-ROOM REPORTS

HIGHLIGHTS: *Absenteeism cut by the use of an unusual attendance record —Production chart expedites changes in spinning—Simple method for reporting warper beams provides quick inventory—One spinning-room overseer develops complete technical-layout record for each order run—Use of overhauling report aids second hand in the inspection of overhaulers' work.*

Spinning Technical Layout

Yarn # 13.00 Hank roving 1.20 Cotton B
Frame 40 Spindle speed 7914 Dia. f. r. 1" R. f. r. 155
Ring size 2 1/16 Trav. 14 Build Warp Stroke 7"
Oz. bobbin 4 oz. Hanks per doff 3.2 Motor pulley Red R. p. m. 1200
Ends down per M spdl. hr. 32 Frame pulley Blue R. p. m. 750

Draft gear 42 Twist gear 52
Constant 474.60 Constant 845.00
Actual draft 10.83 T. p. i. 16.25
Theoretical 11.30 Multiplier 4.50

Spool and Warp

Snick-plate setting 40 Timer setting 1/2 min stop
Color starters Pink Ends 310 Yards 20,000 Std. wt. 568
Lb. per cheese 2 lb Color beams Pink

Fig. 3. The complete technical layout of a yarn or production order is provided for in this report taken from an overseer's note book.

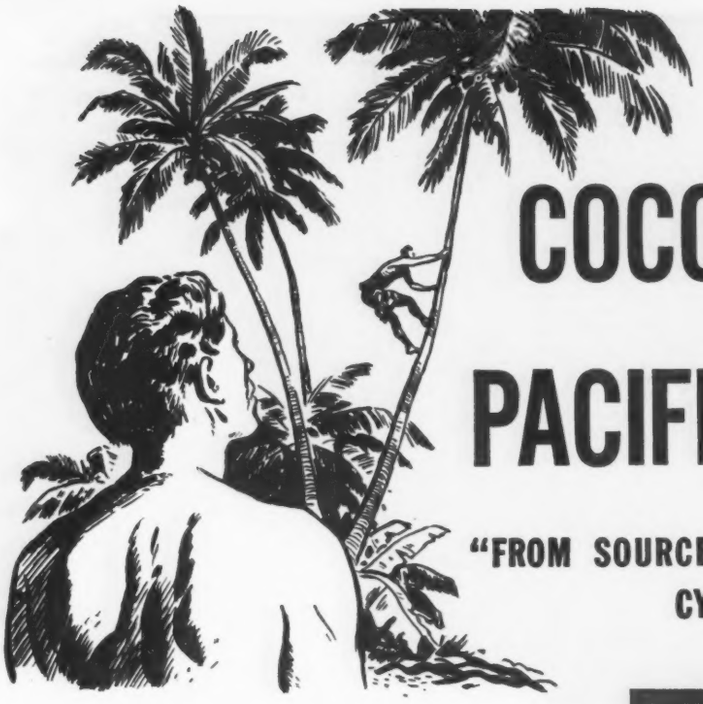
By C. MALLARD BOWDEN
Southern Editor, TEXTILE WORLD

THE MILL OVERSEER hourly meets with demands for facts upon all types of vital mill problems. Machine production and current problems in labor relations and manpower have intensified these demands, with the result that in the average spinning room organization-lines have been tightened and management improved by the use of simple factual reports.

Paper is becoming more important in the spinning room, and a skillful use of it by the overseer of spinning not only kept the finger of management upon a host of manufacturing details during the hectic war-period, but it has also added something to the technique of spinning-room management as practiced in former years. This practice too often has depended upon shoe leather and personal management.

Some of the newer reports being used indicate a proper regard for the financial and production importance of the spinning room and for the time of the overseer and second hands who make up its supervisory personnel. The use of these reports saves valuable time which can be

(Continued on page 236)



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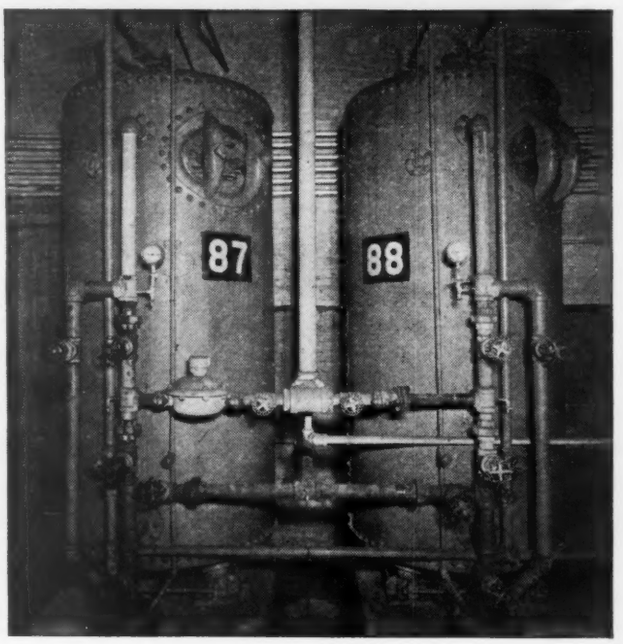
Tea Seed Oil	Red Oil
Cocoanut Oil	Peanut Oil
Babassu Oil	Corn Oil
Rape Seed Oil	Cottonseed Oil
Sperm Oil	Soya Bean Oil



Water is essential to most chemical producing processes. Above is one of the large-capacity water purification units installed in a Cyanamid textile chemical producing plant.

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY ARE...

Penetrants • Softeners • Finishes
Sizing Compounds • DECERESOL* OT Wetting Agents
PARAMUL 115 Water Repellent, and other specialties and Heavy Chemicals**

**Reg. U. S. Pat. Off.* ***Trade-Mark*

American CYANAMID & Chemical Corporation

(A UNIT OF AMERICAN CYANAMID COMPANY)

30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

Textile Men Should Be LEADERS of American Industry

HIGHLIGHTS: *As members of a major branch of manufacture, textile executives must serve the nation — Self-education needed — Technology the heart of our economic system.*

By EDWIN D. FOWLE, *Publisher, TEXTILE WORLD*

IT HAS BEEN SAID that there is no reason why a textile man should not be as well educated as any other man. I not only endorse this view—I want to add that I believe there is plenty of reason why a textile man should be *better* educated than almost any other man.

Those who have anything to do with leading and guiding a major industry have a heavy duty to perform with respect to the welfare of their nation and of the world. If they are sincere, intelligent, and *well informed*, they can contribute materially toward world security and world peace. If they are insincere, unintelligent, or *inadequately informed*, they can help bring about the destruction of the world by the atomic bomb.

By some yardsticks, the textile industry is America's largest. Of particular importance to our discussion is the fact that it employs more people than any other. Is it fantastic to assume, therefore, that an unhealthy textile industry could lead to widespread social unrest? Social unrest induces both management and labor to lean more and more on the government for security. A frenzied search for security in time of economic stress leads to political upheaval, always toward some form of dictatorship. Dictatorship, I hardly need to add, leads to war.

HOW BROADEN? Starting from the assumption that our textile schools are today giving adequate instruction in technology, how can we broaden the field of instruction and make certain that the broadening is along the right lines? Any departure from long-established curricula calls first for educating the educators. Who will undertake that? And what can we do to educate the many who left school years ago and are now active in the industry?

About all we can do at the moment is to encourage self-education. Most of the world's basic wisdom developed to date on subjects of a social, economic, and political nature has been written down somewhere by someone, a little here, a little there, with an occasional summary by this man or that man. I urge that each and every one of us—from school teachers down to mill managers and publishers—take vastly more time out than we have thus far to search the world's literature. We must study it in an open-minded, earnest, and, above all, thoughtful way. We may not subscribe to many of the ideas we read; but if debating them in our minds and with our friends and mentally applying them to the conditions we see about us from day to day lead us to *think* deeply and intently, many among us are bound eventually to come up with some of the right answers to our current problems. At least, we shall avoid the recorded mistakes of past generations.

TECHNOLOGY. One might think from what I have discussed thus far that I look upon a man who is strictly a technologist as one who serves little purpose in the great over-all scheme of things. But nothing could be further from the truth.

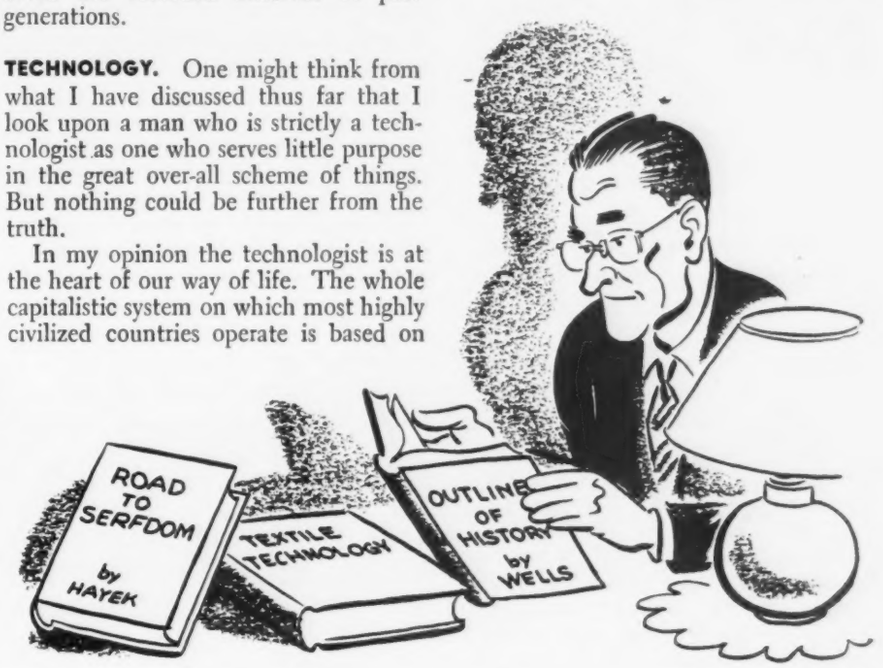
In my opinion the technologist is at the heart of our way of life. The whole capitalistic system on which most highly civilized countries operate is based on technology. The great communistic country of the Soviets is basing its future on technology. And, I believe, the ultimate solution to most of the economic problems which beset our particular industry will be found in improved textile technology.

For example, we are beset with the danger of a further cut in tariffs and with eventually severe competition from foreign countries in our own domestic markets. What other solution is there than to so develop our technology that our labor costs are reduced? If this means heavy investment in more automatic machinery, so much the better; countries which pay low wages have less inducement to install labor-saving machinery. Over a century and a half of experience under the factory type of industrial organization shows that labor-saving machinery is distinctly beneficial to labor in the long run, since it reduces costs and prices, widens markets, and so calls for higher production and, in consequence, more total workers in the industry, who can be paid a higher wage.

How much opportunity have we to develop such machinery?

We must remember that in the past

(*Continued on page 224*)



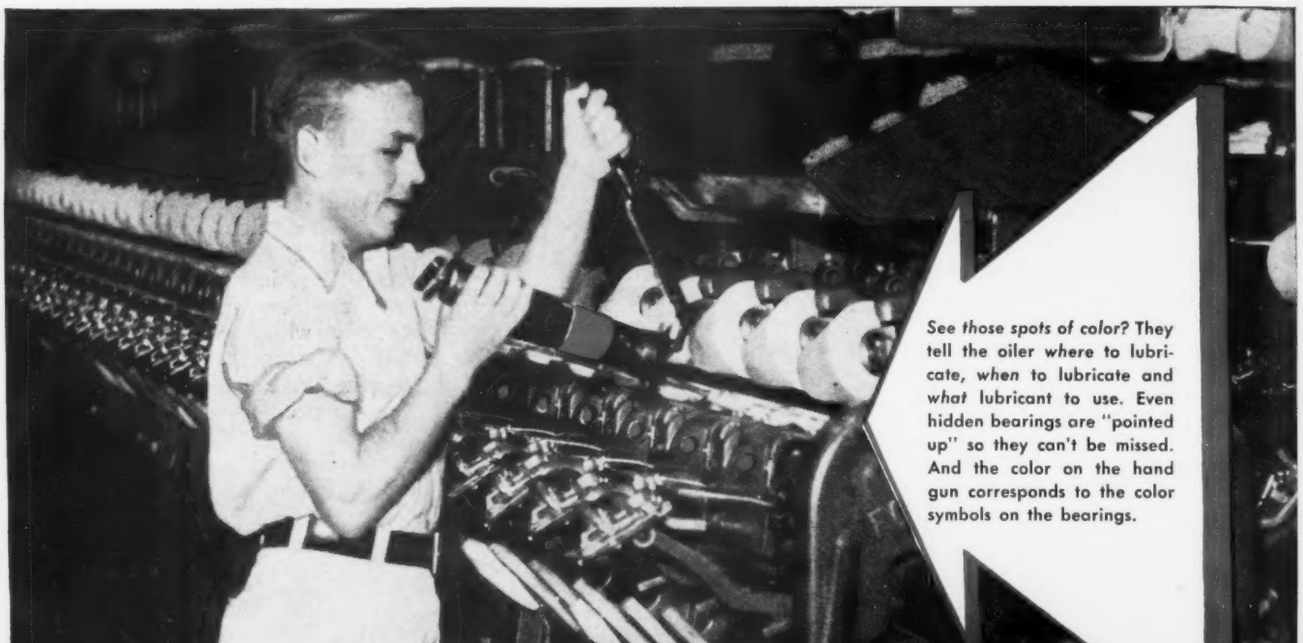
Self-education is essential for teachers, mill managers, and publishers.

Abstract of talk before Alumni Association of Philadelphia Textile Institute, Jan. 31.

HOW RICHMOND HOSIERY MILLS CURED A LUBRICATION HEADACHE...

with the New Alemite

COLOROUTE PLAN OF LUBRICATION



See those spots of color? They tell the oiler *where* to lubricate, *when* to lubricate and *what* lubricant to use. Even hidden bearings are "pointed up" so they can't be missed. And the color on the hand gun corresponds to the color symbols on the bearings.

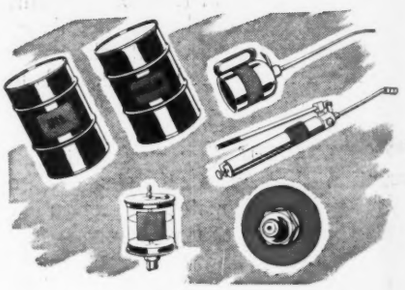
RICHMOND HOSIERY MILLS, Rossville, Ga., is one of the country's largest manufacturers of hosiery, and hosiery yarns. There are literally *thousands* of lubrication points on the machines. But thanks to the Alemite Coloroute Plan of Lubrication, even inexperienced help can maintain their machines like veterans.

As the Richmond management puts it—"Motor failures from burned out bearings have almost ceased in our plant. We consider the Coloroute System as one of the best things to come our way in a long time."

What Coloroute Is

It's a "foolproof" plan for eliminating costly human error in lubrication. Each machine is analyzed—also all lubricating equipment. Then all fittings, gears and oil holes are plainly marked with identifying colored symbols. Each grease and oil drum and all equipment used in handling and applying lubricants are "color-marked" to correspond to the color symbols on the machines. In addition to assuring positive lubrication, Coloroute can reduce the number of lubricants required by 30% to 75%. The complete plan is easily set up, quickly taught and its economies and benefits are applicable to any plant, large or small.

For complete information on Coloroute, and new, free descriptive booklet entitled "Caution," write Alemite, 1888 Diversey Parkway, Chicago 14, Illinois.



ALEMITE HELPS THE WORLD GO 'ROUND

American Product of STEWART WARNER

ALEMITE

Alemite* ALONE *Combines all 3 in Lubrication

1. EQUIPMENT 2. PROCEDURES 3. LUBRICANTS

SHORT-CIRCUITS
Need Speedy Interruption

HIGHLIGHTS: *Inadequate short-circuit protection on a branch line can shut down an entire plant — Added equipment, higher machine speeds, or larger packages may mean that protection equipment is now inadequate — Circuit breakers or fuses should interrupt shorts close to the fault.*

By D. L. BEEMAN
Industrial Engineering Div.
General Electric Co.

THE FLOW OF SHORT-CIRCUIT CURRENT must be stopped in the shortest practical time in textile mills lest it damage considerable equipment, cause fires, or even cause injury to nearby personnel. Normally, circuit breakers, and sometimes fuses, are used to open the faulty circuit to stop the flow of short-circuit current. All spinning-frame, loom, or other motors—as well as any place current is used, such as in electric heating elements—should have some kind of short-circuit protection.

CIRCUIT BREAKERS OR FUSES. Circuit breakers have two functions and two current ratings. The first function is to carry normal load currents and, when necessary, to switch them. Fused switches are sometimes used for this purpose also.

The second function of these breakers is to open the circuit to stop the flow of short-circuit current into a fault; in other words, to interrupt the short circuit. The ability of the breaker to open short-circuit current is given in amperes or kva. and is known as the interrupting capacity rating.

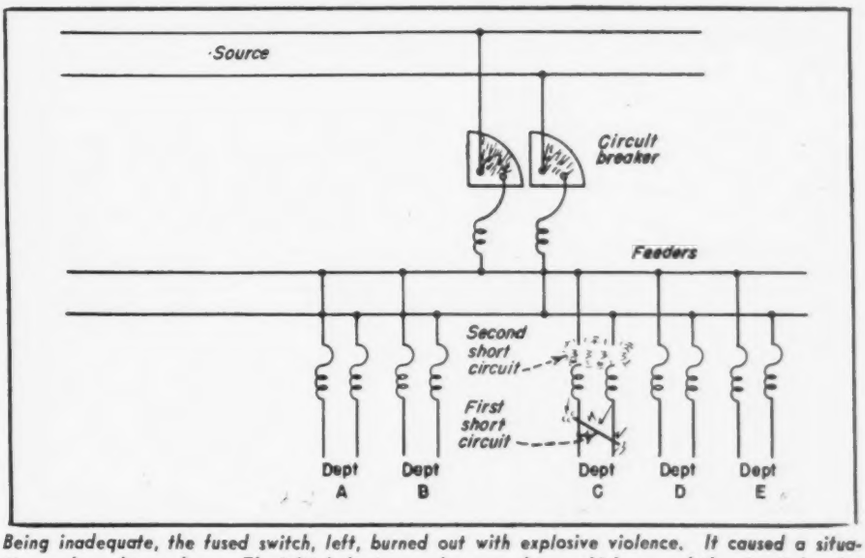
For textile operations, as well as others, the circuit breaker or fuse must be so selected that its interrupting capacity rating is not less than the short-circuit current which the system will deliver, just as it must have a continuous ampere rating that is not less than the current drawn by the load.

It is not possible to prevent entirely short circuit in textile mills. However, by using breakers or fuses of adequate interrupting capacity rating, it is possible to minimize their effects, especially as a cause of lint fires.

When the short-circuit current delivered to a loom motor, for example, is in excess of the interrupting capacity rating of the short-circuit protective device; i.e., the breaker or fuse, the protective device may not successfully open the circuit, and dangerous consequences may follow.

Because the possible consequences of using breakers or fuses of inadequate ratings are not always understood, inade-

(Continued on page 227)



Being inadequate, the fused switch, left, burned out with explosive violence. It caused a situation such as shown above. The initial short caused a second one which opened the circuit breaker next to the power source. The whole plant was shut down.

WE make these surveys right along, and they result in a common-sense plan to assure correct application of the right lubricants. Briefly, this is what the Shell Lubrication Engineer will provide:

1. Survey and analysis of the lubrication requirements of your plant engines and machines.

2. Recommendations of proper lubricants, together with specific instructions as to when and how they should be used.

3. Scheduled check-ups for all critical or unusual machinery.

4. Reports (if you want reports) about the performance and economies of recommended lubricants in use in your machines. To the Shell Lubrication Engineer, though, the best report is short and sweet: "All machines continuously in service, well lubricated."

* * *

Right here we ought to warn you that the Shell Lubrication Engineer isn't going to tell you everything you're doing is wrong—he may, in fact, find very little fault with the lubricants and procedure you are now using.

Then, too, he will come to you without a rigid set of rules. Your lubricating procedures are probably based on pretty sound experiences that your own folks have had. Your problem is really one of picking out the weak spots before they become trouble spots . . .

So call the Shell Lubrication Engineer for that survey. If your property is so large that he needs help, he will have it. You are bound to gain, if it is only peace of mind!

There is no obligation on your part.

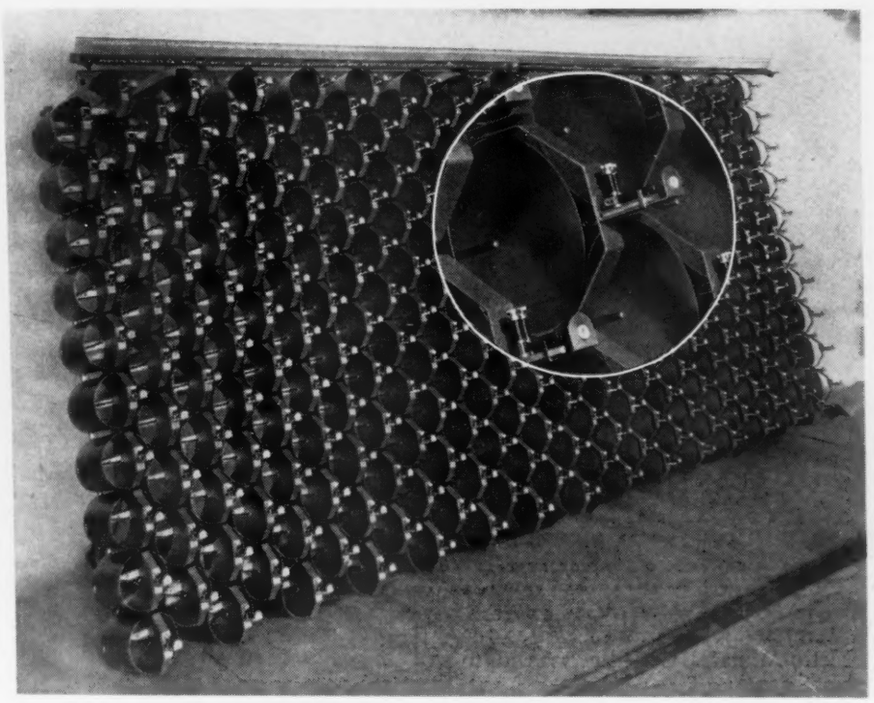
Call your local Shell Representative, or write Shell Oil Company, Incorporated, 50 W. 50th Street, New York 20, N. Y., or 100 Bush Street, San Francisco 6, California.

SHELL INDUSTRIAL LUBRICANTS

SHELL

TEXTILE Equipment NEWS

Honeycomb Creel For High-Speed Warping



Each section of the warper creel accommodates 150 ends. Units are constructed to permit use of any overend supply package. (Danica)

A new design and several new features are embodied in the Danica high-speed warper creel now being manufactured by Danica Laboratories of Paterson, N. J.

The creel uses two adjustable ring tensions for each end, and the amount of tension on each pair of tension rings can be set individually, thus covering a wide range of yarn. The patented tension assemblies are mounted on gates which are pivoted on top of the distinctive "honeycomb" shields. The gates swing away to permit creeling of cones, bobbins, or any other packages that can be run overend.

The round shields prevent a ballooning end from hitting other ends or any obstruction which would cause it to break, and permit very high speeds to be run. A fur pad is mounted at the base of each position for use in running cones or tubes.

The creel is made up in 150-end sections and is normally supplied in 300- or 450-end units. Each section is mounted on adjustable rollers and incorporates a drop-wire stop motion in the control board on top of the assembly. A 300-end unit would occupy a floor space 1x4 ft. Danica also supplies an electrical knock-off mechanism and a chain drive for the warper-frame. The creel is especially recommended for warping complicated styles and for short runs.

High-Speed Warp Knitting Reported from Germany

Warp-knitting machines which compare favorably in speed with the new high-speed machines announced in this country are reported to have been manufactured in Germany, according to Allied military investigators, members of a Combined Intelligence Objectives Subcommittee which visited Germany.

Schneider & Reuthner, of Limbach, and Ernst Saupe, also of Limbach, are credited with Germany's best warp-knitting machines. Tricot machines are reported as having a maximum speed of 500 r.p.m. and double warp-knitting machines (S&R Simplex) are said to operate at up to 300 r.p.m.

A survey of some German and other European knitting developments are included in Report No. 502 issued by the Office of the Publication Board, Department of Commerce, Washington, D. C.

Black Light Unit Identifies Textile Materials

A compact ultra-violet light source is offered by Black Light Products, 450 E. Ohio St., Chicago, Ill., for use in studying textile materials.

Popularly referred to as "black light,"

Model BL-2 operates on 60-cycle, 110-volt current to produce black light. (Black Light Products)

ultra-violet radiations cause may materials to glow with distinctive colors and many materials invisible in ordinary light to become visible. An example of the latter is a spot of clean lubricating oil on gray cloth.

Black light is a relatively new aid for the textile laboratory and is being used chiefly for identification purposes.

Acid-Resistant Wood Has Structural Advantages

A plastic-impregnated structural wood, said to be resistant to acids, moisture, decay, and insects, has been developed by Koppers Co., Inc., Koppers Bldg., Pittsburgh, Pa. Known by the trademark "Asidbar," the wood is treated with an acid-resistant bituminous compound usually in excess of 50% of the weight of the wood.

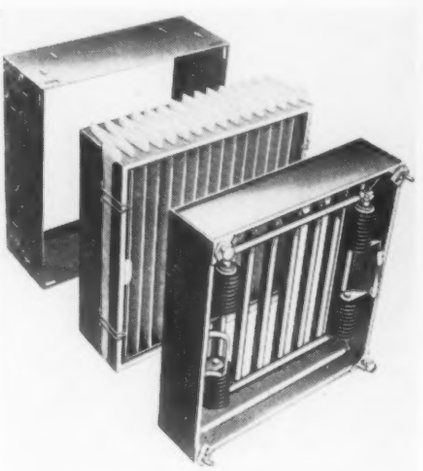
Deep penetration of the wood is said to be attained, and the plastic is reported to remain a solid up to a temperature of approximately 130° F. By increasing the weight and hardness of the wood, its resistance to wear is increased.

The treatment with the bituminous compound gives Asidbar a blackish color, making it unnecessary to paint it. (Koppers)

Cellulosic Material Used for Filtering Air

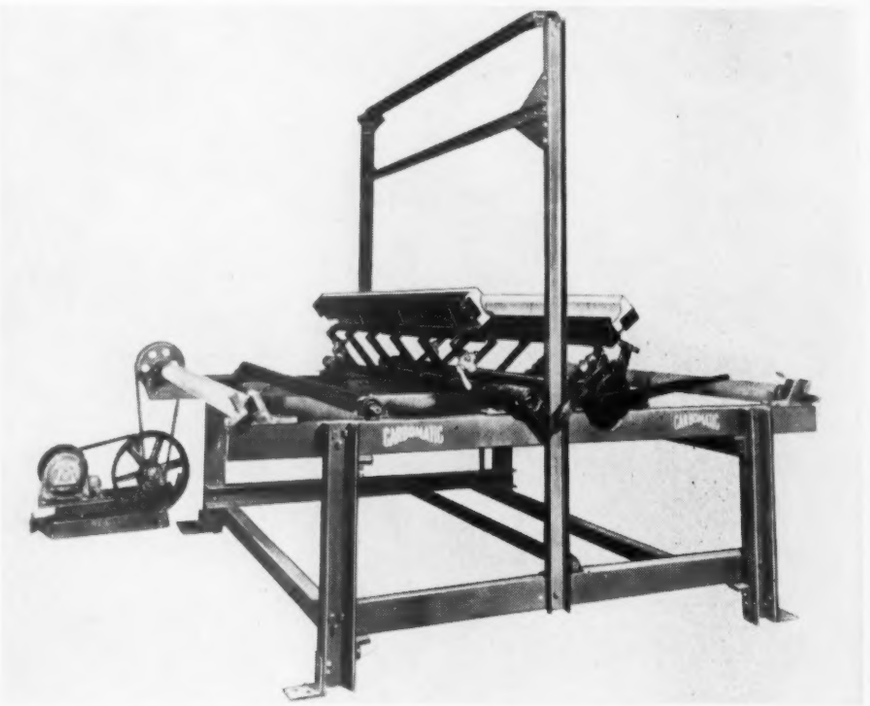
An air filter composed of sheets of cellulosic fibers which, when an electric charge is applied, act as dust-collecting electrodes is being manufactured by the American Air Filter Co., 125 Central Ave., Louisville 8, Ky. Known as the "Electro-Airmat," the filter is said to operate at a normal velocity of 35 ft. per min.

When the paper in the Airmat has accumulated its load, it is replaced by clean material from a mechanical loader by turning a crank. Spare cells loaded with clean paper can be provided.



When the Electro-Airmat is charged, the plies of porous material tend to separate and permit filtering. (American)

Both Sides of Cloth Singed Simultaneously



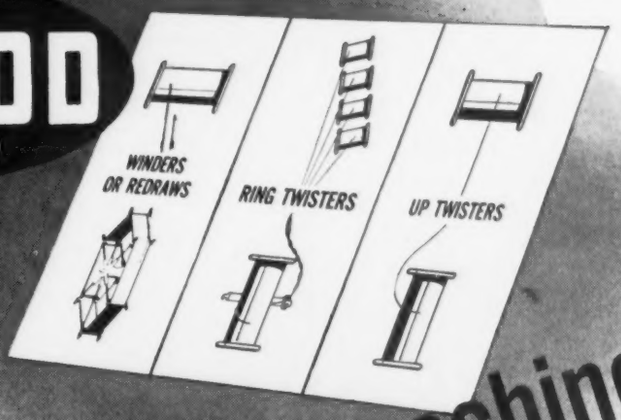
A singeing machine with adequate controls for processing any of a range of several widths of cloth with one pass through the machine is being manufactured by the Carbomatic Corp., 117 West 63rd St., New York 23, N. Y. Variable-speed control is provided so that heavy and light fabrics can be processed at the proper speeds. (Carbomatic)

Emergency Alarm Provides Safe Process Control

The controller sounds an emergency alarm when temperature deviates from the safe range. (Brown)

A new safety, emergency-alarm feature that protects process equipment and materials has been announced by the Brown Instrument Co., Philadel-

ATWOOD
SINCE 1852



"What's new in yarn machinery?"

Wherever they go, Atwood representatives are constantly asked, "What's new in yarn machinery? What developments are included in your latest machines?"

Such questions are only natural because it is common knowledge that many of the outstanding innovations in twisting and redrawing machines have been pioneered at Stonington. Concentrating solely on machines for the twisting and throwing of yarn, Atwood engineers are fully conversant with the problems and needs of the industry, and have repeatedly demonstrated their ability to solve yarn production problems.

And now, with the backing of Farrel-Birmingham—with the extensive engineering, research and production resources of Farrel-Birmingham added to Atwood's experience in the building and installation of yarn machinery—you can expect to find a still greater measure of leadership in Atwood machines.

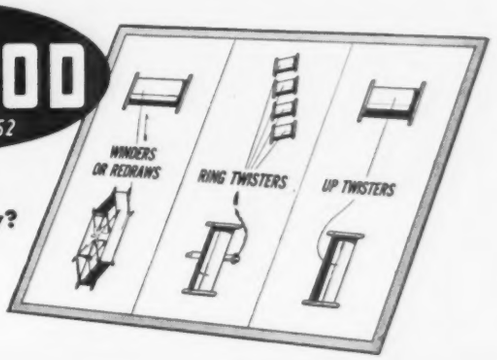
The next time an Atwood representative calls on you, ask him, "What's new in yarn machinery?" Or, in the meantime, write for information about the latest Atwood machines.

AD-1

ATWOOD DIVISION
FARREL-BIRMINGHAM COMPANY, INC.
STONINGTON, CONN.

ATWOOD
SINCE 1852

What's new in yarn machinery?



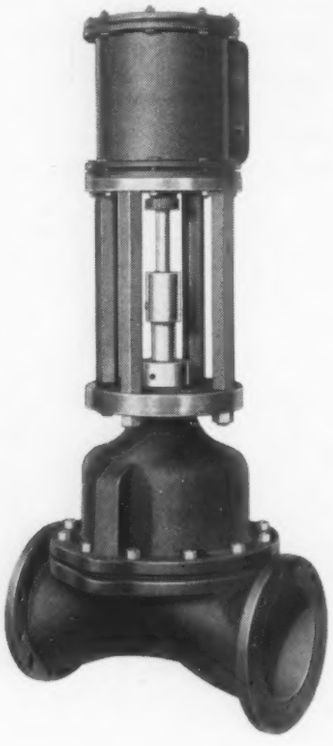
phia, Pa. Known as the Brown Electronik Contact Controller, the alarm operates automatically and provides on-off control in addition to air control to actuate motorized valves, solenoid valves, contactor panels, signal lights, etc.

As shown in the accompanying picture, contacts *A* and *B* are made or broken by the action of cam *C* and roll *D*. The control point is set by loosening the knurled knob *E* and rotating cam *C* so that its notch corresponds with the position, of the temperature pen that has been previously moved to the desired point. The pen position sounds the emergency alarm. A red pointer on the scale, not shown in the picture, indicates the temperature setting of the contact controller.

New Valve Control Uses Compressed Air

Air operation of valves, particularly for problems of remote control, is provided by Hills-McCanna Co., Chicago, Ill., in its air-actuated pistons mounted on valves. Air controls make possible smooth throttling over a wide range to permit valve-control instrumentation.

A safety measure for shutting off the valve in case the main air supply fails is provided in an auxiliary air tank.



The air piston is mounted on the valve. (Hills-McCanna)

Small pH Intervals Shown by Test Papers

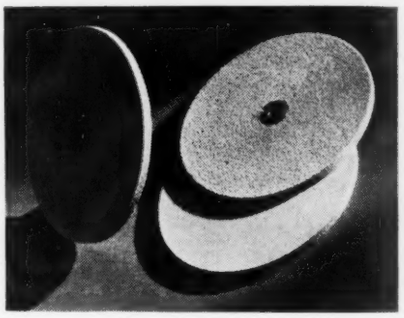
The pH intervals in a range of 1 to 14 are indicated by color changes of the test papers. (Cargille)

Determining small pH intervals with short-range test papers which indicate the intervals by well-defined color changes can be accomplished with the new Hydrion papers announced by R. P. Cargille, 118 Liberty St., New York 6, N. Y. Readings can be made to 0.25 pH and a pH range of 1 to 14 is covered by the six papers of the test set. Transparent plastic dispensers are used to hold the papers, and each dispenser contains two papers in roll form.

Stone Used to Reface Calibrase Testing Wheels

A stone for refacing the Calibrase wheels of the Taber Abraser, a testing instrument for determining the rate of wear of fabrics and other materials, has been announced by the Taber Instrument Corp., North Tonawanda, N. Y.

One side of the stone is made of a coarse grit for refacing the wheels at the start of a test, and the other side is a fine grit to be used at intervals during the test to insure standard abrasive action. The stone is said to improve control of the test and to be of longer life than the refacing material previously used.



One side of the stone is of coarse and the other side of fine grit. (Taber)

USEFUL ACCESSORIES FOR THE TEXTILE MILL

Binocular Magnifier

A binocular magnifier, small enough to carry in a pocket or purse and equipped with dual lenses which afford three dimensional vision, is being marketed by N. L. Huebsch, East Williston, N. Y. The magnifier is available in four different powers and focal lengths.

Stainless-Steel Containers

Stainless steel containers in 5 to 50 gal. capacities are being manufactured for industrial use by the Metal Glass Sales Co., Atlanta, Ga. The containers are light in weight, with strong handles welded to the sides. Upon request, a few special modifications can be incorporated in their construction.

Masonry Paint

An exterior oil paint for use on stucco, concrete, stone, or brick is available at The Wilbur & Williams Paint Corp., Boston, Mass. The paint is said to adhere to smooth or rough, damp or dry masonry, and to resist lime and alkali action.

Computing Chart

A computing chart for converting inventory quantities into the time it will take to consume them is being made available by Systems Div., Remington Rand, Inc., New York, N. Y. It is said that the use of the chart promotes accuracy and reduces clerical time and costs.

Portable Steel Desk

A sturdy portable steel desk, especially adaptable for shop foremen, shipping clerks, etc., is now being marketed by Lyon Metal Products, Inc., Aurora, Ill.

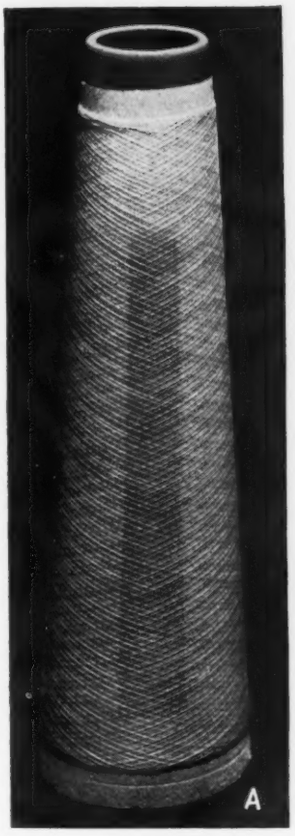
Model No. 2131-15 stands on 3-in. casters and has a positive brake attachment. The desk hood provides adequate space for the storage of working papers and has a smooth 30-in. top with a 3-in. over-all slope. A 24x28x3½-in. drawer is equipped with a lock for the safekeeping of important papers.

Visible Lubricator

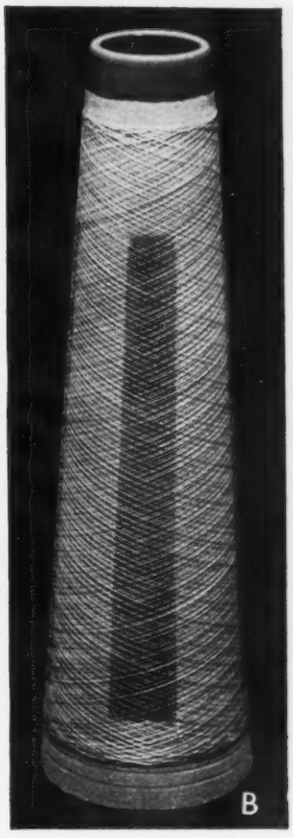
A heavy-duty, constant-level lubricator having a visible reservoir is being manufactured by Oil-Rite Corp., Milwaukee, Wis. The lubricator has an oil outlet on the bottom and on the side so that it can be connected to the top or side of a bearing.

Oil in the bearing is maintained at a constant level by a continuous feed from the reservoir, and the oil supply in the reservoir can be seen at all times.

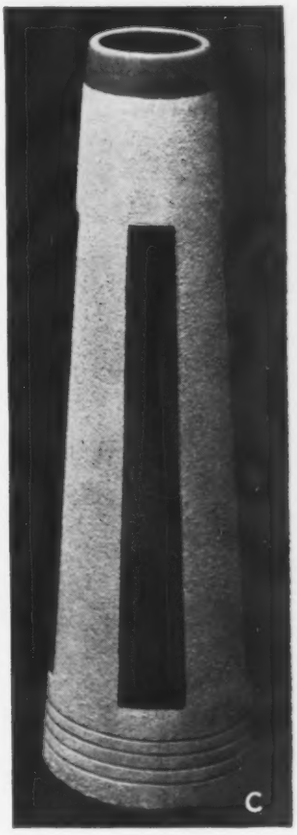
Saves! PRESS-OFF Waste



Shows cone as runout approaches.



At point where change can be made with minimum press-off.



Yarn completely delivered.

Easier to see than the solid colored cone as run-out approaches . . . The one-half inch black bands can be picked up more quickly by the eye, and accurate judgment for *minimum* press-off becomes second nature.

Sonoco
SERVES THE WORLD
PAPER CARRIERS

Sonoco Products Company

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

DONT WASTE PAPER
SAVE
WASTE PAPER

DYES & CHEMICALS — PRODUCTS & PROCESSES

"Definized" Finish For Stability Control

"Definized" is the name of a new stabilizing finish that makes rayon fabrics fully washable, according to William H. Scott, president of the Aqua-Sec Corp., 1450 Broadway, New York, N. Y. This process was developed by the Alrose Chemical Co., Providence, R. I., which has applied for patents.

In achieving the finish, a protective colloid is applied to gray goods on a pad or quetch and then the goods are brought back to gray width and dried on a tenter frame. The cloth is then immersed in 60° twaddle caustic on a pad and either batched and neutralized with bicarbonate in a jig or neutralized in a continuous range, if such a unit is available at the plant. The cloth is then scoured or boiled off in a normal fashion, dyed, and dried without tension, preferrably on a slack dryer or air-laid dryer. A sample of the fabric is taken from the roll, washed, and ironed on a flat bed-press to determine the finished width of the fabric. All further operations that the goods require are then normally followed; and the goods are framed to the determined width, as previously ascertained.

Oxidizing Agent Used To Replace Heat

Substituting an oxidizing agent for heat, Sylvania Industrial Corp. has developed an improved method of making cellulose suitable for textile finishing. In the past, heat has never been completely satisfactory because of the difficulty of controlling the exact amount of it that is required; and as a result, local overheating created non-uniformities in the finished product.

Patent on the new process has been issued to the company in the name of Dr. Ralph T. K. Cornwell, director of research. According to it, the cellulose is treated with an oxidizing agent for sufficient time to increase its solubility in aqueous alkaline solutions. The patent also covers the fact that in the research on this new method Dr. Cornwell discovered that waste regenerated-cellulose material is a preferred material to use in making this finishing agent. Present indications are that it will also be widely used as a pigment binder in the printing and pad dyeing of textiles.

DDT Emulsifier

NONAETHYLENE GLYCOL MONO OLEATE S 725; Glyco Products Co., Inc., 26 Court St., Brooklyn 2, N. Y.

DDT emulsions are reported readily prepared through the use of a liquid non-ionic emulsifier, Nonaethylene Glycol Mono Oleate S 725. Emulsions are said to be economical, the procedure is simple, and a minimum of effort and equipment is required.

The amount of DDT required to give the desired concentration is dissolved in a suitable amount of a solvent, such as Xylol, and about 10% of the liquid S 725 is added to the DDT solvent solution, with which it is readily miscible. This DDT solvent concentrate is then added to the desired amount of water when and as needed, whereupon it forms an emulsion with little or no agitation.

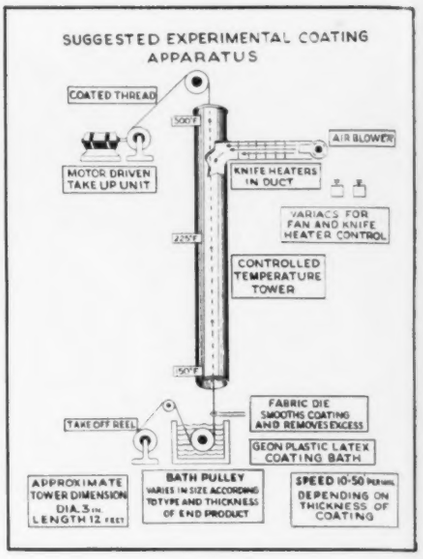
A typical example of such a DDT emulsion calls for the use of 30 lb. of DDT powder which is dissolved in 90 lb. of Xylol, after which 10 lb. of the Nonaethylene Glycol Mono Oleate S 725 is added. This basic concentrate is added to about three times its volume of water, with which it rapidly emulsifies with a minimum of stirring.

Plastic Latex Coating

GEON; The B. F. Goodrich Chemical Co., Rose Bldg., Cleveland, Ohio

Plastic latex made with Geon polyvinyl resins is now adaptable for impregnation or plain coating of thread, yarn, string, and wire, according to The B. F. Goodrich Chemical Co. Cords and threads of Fiberglas, nylon, silk, cotton, wool, and rayon (as well as wire) have been coated.

A thin, even coat of Geon plastic latex is applied to the thread or cord and heated, preferably in a tower having a graduated temperature range from 150 to 300° F. This method yields optimum physical properties, while fair properties can be attained with a uniform temperature of 200° F.


SUGGESTED EXPERIMENTAL COATING APPARATUS
COATED THREAD
500°F
AIR BLOWER
MOTOR DRIVEN TAKE UP UNIT
KNIFE HEATERS IN DUCT
VARIACS FOR FAN AND KNIFE HEATER CONTROL
225°F
CONTROLLED TEMPERATURE TOWER
50°F
TAKE OFF REEL
FABRIC DIE SMOOTHS COATING AND REMOVES EXCESS
GEON PLASTIC LATEX COATING BATH
APPROXIMATE TOWER DIMENSION DIA. 3 in. LENGTH 12 FEET
BATH PULLEY VARIES IN SIZE ACCORDING TO TYPE AND THICKNESS OF END PRODUCT
SPEED 10-50 FEET/MIN. DEPENDING ON THICKNESS OF COATING

The company has devised a tower apparatus in which this variable regulated temperature range can be most satisfactorily employed, and through which the material can be passed at from 10 to 50 ft. per min., depending on the thickness of the coating. A view of the apparatus is shown above.

Screen-Printing Thickener

SYNTRAG; Stein, Hall & Co., Inc., 285 Madison Ave., New York 17, N. Y.

Syntrag, a thickener for screen-printing of indigosol, rapidogen, direct, acid basic, and acetate dyestuffs, which can also be used for white pigment-discharge printing in conjunction with albumen and synthetic resin binders, is announced by Stein, Hall & Co., Inc.

For many types of printing, particularly when an unusually soft hand is required, it has been customary to use a solution of gum tragacanth as a thickener. Offered as a replacement for this gum-tragacanth solution, Syntrag is said to give equal if not superior results, and at a saving.

Syntrag can be used wherever a gum thickener is used, but is not recommended for chrome or vat colors. It is especially recommended for printing rayons, spun rayons, acetates, and other fine fabrics.

Advantages claimed include color yield and brightness equal to that of starch and superior to natural gums, excellent rinsibility, and penetration which eliminates the possibility of the mottled effect which usually results from uneven penetration.

REVOLUTIONIZING WOOL PROCESSING IN LEADING MILLS EVERYWHERE!

... Fybrol 1115 ....

THE *Self-Scouring* WOOL FIBRE LUBRICANT
WITH REMARKABLE WETTING AND DETERGENT PROPERTIES

- ☆ NON-GUMMING
- ☆ SOLUBLE IN HOT WATER
- ☆ UNIFORM PENETRATION OF FIBRE
- ☆ INCREASES TENSILE STRENGTH OF YARN
- ☆ SELF-SCOURING ☆ SOAPLESS FULLING

IMPORTANT

FREE TECHNICAL ASSISTANCE

Sonneborn offers you the services of its technical experts who will work with you in your mill, at no cost or obligation, to help establish the proper method of applying Fybrol 1115 for best results.

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Plant and Laboratories:
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Write or wire today for details on Fybrol 1115L, the remarkable new *Self-Scouring* Worsted Processing Oil. Same exclusive features and advantages as the wool oil announced above.

Woolen and Worsted Oils • Petroleum Sulfonate Bases • Detergents and Dyeing Oils • Penetrants • Delustering Specialties • Warp Dressings • Finishing Sizes and Softeners • Water Repellents • Sulfonated Oils • Wetting and Rewetting Agents

Kinks AND SHORT-CUTS

A $25 SAVINGS BOND FOR YOUR IDEA

A $25 Savings Bond will be awarded each month for the most useful "kink" published in this department. This contest is open to all readers of TEXTILE WORLD, and there is no limit to the number of entries any one person may make.

Contributions must be received not later than the last day of the month to be eligible for the award for the second succeeding month. Items may pertain to production methods, mill engineering, safety, cutting costs, improving quality, speeding up production, in brief any little device, stunt, kink, or short-cut which you have tried out in your own mill and which you believe will be helpful to other mill men. Items should contain sufficient detail to permit other mill men to utilize the ideas in their own operations. Previously published material is not eligible for the award. Judges of the contest are the editors of TEXTILE WORLD.

TEXTILE WORLD shall have the right to publish any items submitted. Items which are accepted will be paid for at our regular rate for this type of matter with extra payment for appropriate sketches or photographs. The sketch you submit need not be a finished drawing.

In writing to this department, give your real name and address as evidence of good faith and to permit payment for items accepted. Please advise whether your name may be used with the kink.

Contributions should be addressed to: Technical Editor, TEXTILE WORLD, 330 West 42nd St., New York 18, N. Y.

★ **SAVINGS BOND PRIZE FOR FEBRUARY**

(December Contest)

Detector Stops Loom When Back Cell Is Empty

Occasionally the last shuttle in the back cell of the shuttle-changing magazine on a Crompton & Knowles loom does not drop into proper position for the pusher to place it in the transfer position. This error is caused by the shuttle, lacking the weight of other shuttles on top of it, moving too freely. It may turn on edge or come to rest in a leaning position. As the lay moves forward or backward, the improperly placed shuttle may be struck by the lay and jammed against a cell wall or the back plate. A broken wall, plate, or shuttle is the usual result.

A loom knock-off device, wired to the electric warp stop-motion, will prevent this damage by stopping the loom when the last shuttle in the back cell is dropped into position to be acted upon by the pusher.

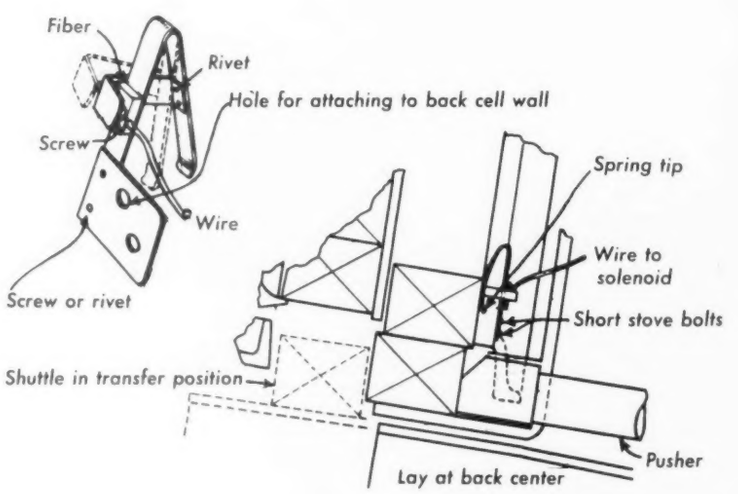
The empty-cell detector consists of five parts: (1) a plate for attaching the detector to the cell wall, (2) a piece of flat spring steel, (3) a cross-member of thin steel, (4) insulation, and (5) a length of electric wire.

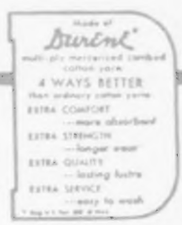
The plate is made of $\frac{1}{16}$-in.-gage steel and should be about $1\frac{3}{4}$ x $2\frac{1}{2}$ in. in size. Two holes for stove bolts must be drilled in the plate and corresponding holes drilled in the back wall of the back cell.

One end of a 7-in. length of flat spring steel is fastened to an end of the plate with two screws. Holes for these screws must be drilled in the plate and threaded. The other end of the spring steel is bent back about 3 in. from the end and away from the side to which the plate is attached.

The crosspiece is fastened to the unattached end of the spring steel and crosses over the attached end. It should be bent down over the attached end so that when the flat spring is released the bent end of the crosspiece will contact the attached end of the spring steel.

(Continued on page 166)



The stop-motion circuit is held open by the shuttles in the back cell. When the last shuttle leaves, the detector opens the circuit and causes the loom to stop.

Yes, there is Durene—and Dixie Durene, too! But while not enough to meet all present demands, our volume is as high as we now can produce under present conditions.

Small wonder returning veterans demand garments made from Durene. From wartime experience, they know of its *strength* . . . to stand many washings, rough usage; its high degree of *absorption*; its softness . . . for comfort.

* * * * *

When yarns again can be produced in abundance, knitters everywhere will knit the brand so much in demand—

Dixie Durene
A PRODUCT OF CONTROLLED MANUFACTURE

a product of "Controlled Manufacture." Be sure to include it in your plans.

Dixie MERCERIZING COMPANY CHATTANOOGA 1, TENNESSEE

At this point of contact a piece of non-conductive material, such as fiber board, is attached to the flat steel spring on the outside of the bend. A screw hole is drilled and threaded in this insulation, and a screw for holding the electric wire is inserted. This screw must be so located that when the pressure against the unattached end of the spring steel is removed the crosspiece will touch the screw head, completing an electrical circuit.

One end of an electrical wire is held by the insulated screw, and the other end is spliced into the warp stop-motion circuit.

When the detector is assembled, attach it to the back wall of the back shuttle cell by placing small stove bolts through the two bolt holes drilled in the $1\frac{3}{4}$ x $2\frac{1}{2}$-in. plate and the corresponding holes drilled in the cell wall. The unattached end of the spring should extend past the side of the cell wall and about $\frac{3}{8}$ in. into the path of the shuttles as they move down the cell into pushing position.

As the shuttles feed downward, the spring is pushed back, holding the electrical current open. When the last shuttle drops into position in front of the pusher, the tension is removed from the spring and the crosspiece closes the circuit, stopping the loom. *(K-438) H. E. Wenrich, Berwick, Pa.*

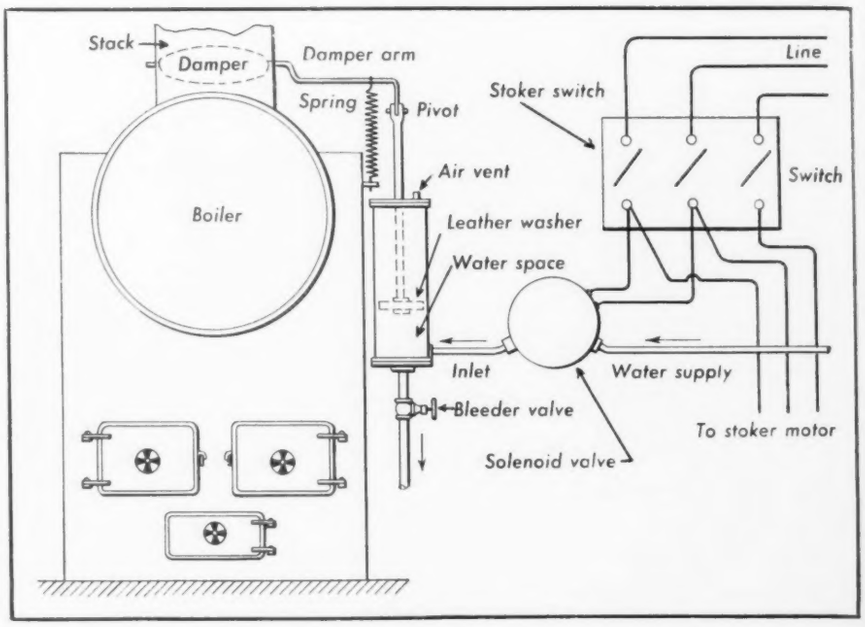
Hydraulic Pressure Controls Boiler Damper

The damper of a boiler fed by a stoker can be controlled effectively by hydraulic pressure with the arrangement shown in the sketch. A solenoid valve is wired in to the stoker switch so that the valve opens when the stoker begins operating and closes when the stoker stops.

The valve controls the flow of water into a small cylindrical tank mounted vertically to the side of the boiler furnace. The water inlet is at the bottom of the tank; and as the level of water rises, a leather washer or float inside the cylinder is raised. An air vent at the top of the tank permits air to escape as the washer is raised.

A small shaft attached to the washer extends through the top of the tank and connects with the damper arm. The arm is made in the shape of a crank and is attached to the damper so that when the arm is raised the damper is opened.

A pipe leading from the bottom of the tank to the steam-return container empties the tank when the stoker switch cuts off and the solenoid closes the water inlet. The flow through this pipe is controlled by a bleeder valve. *(K-437) Thurman H. Smith, Shelby, N. C.*



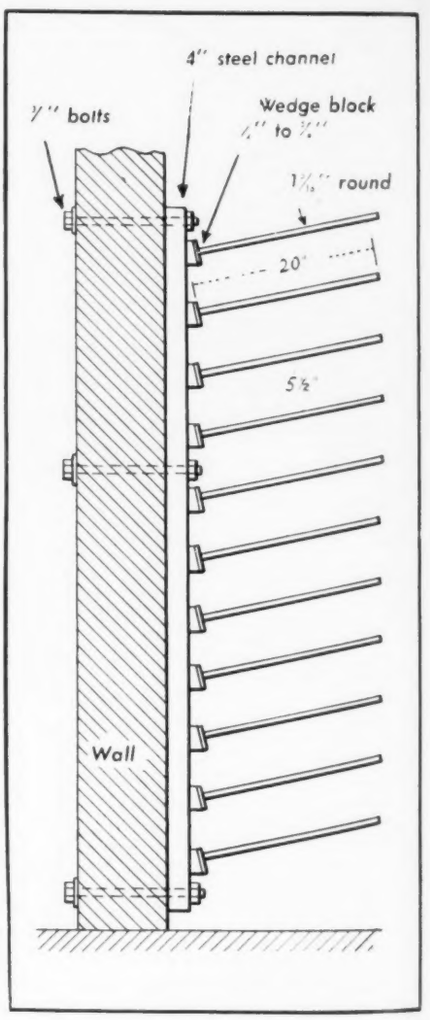
An over-extended spring, connected between the side of the furnace and the damper arm, closes the damper by pulling down the arm when the pressure against the leather washer is removed.

Discarded Spindles Hold Change Gears

In many mills, change gears are placed in bins or cupboards when not in use on the machines. This method of storage often results in mixed gears and in trouble in sorting out the gears when taking an inventory. We have found a rack, shown in the sketch, to be of great value in storing change gears.

Two lengths (about 50 in. each) of 4-in. channel iron were bolted to the wall about 60 in. apart. The ends of several flat iron bars, $\frac{3}{8}$x3 in., were bolted crosswise to the channel-iron posts, a cast-iron wedge being placed under the bottom edge of each bar at each post. Discarded spindles were riveted about 6 in. apart to the crossbars.

The wedges under the bottom edges of the crossbars caused the spindles to incline upward toward the ends, so that gears placed on the spindles would not slide off. *(K-425)*

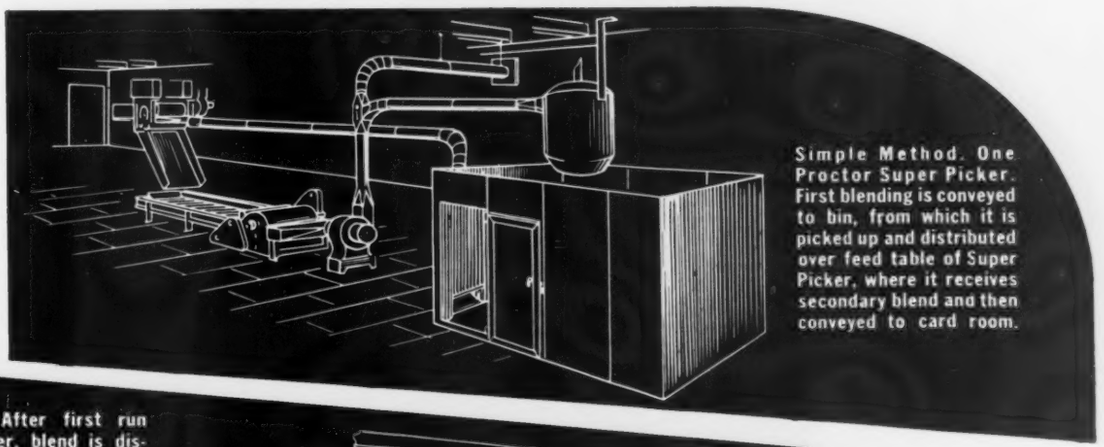


Only gears of one kind and one number of teeth are placed on each spindle.

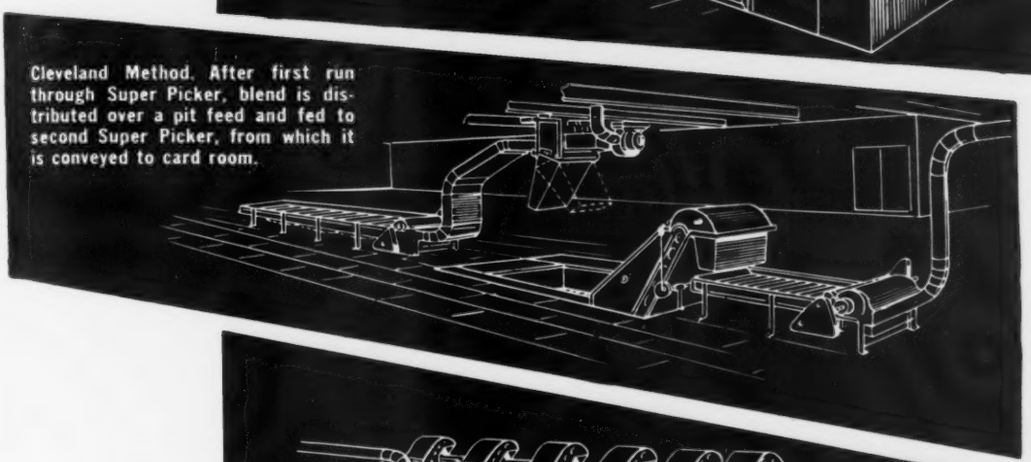
Skein Dryer Converted To Handle Rayon Cakes

When we changed over part of our throwing plant from skeins to cakes, one of our easiest jobs was to accommodate

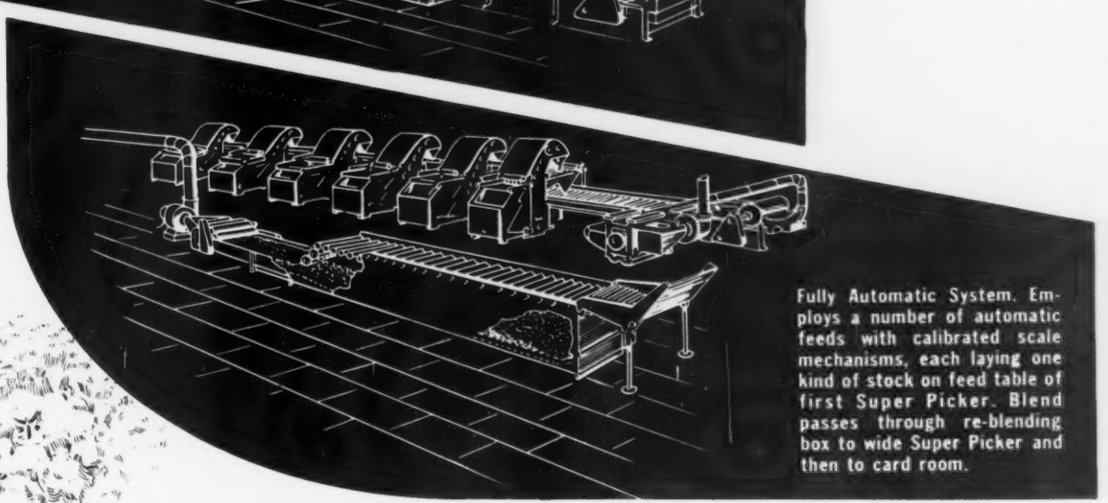
THERE'S A BLENDING SYSTEM TO MEET YOUR INDIVIDUAL PRODUCTION NEEDS...



Simple Method. One Proctor Super Picker. First blending is conveyed to bin, from which it is picked up and distributed over feed table of Super Picker, where it receives secondary blend and then conveyed to card room.



Cleveland Method. After first run through Super Picker, blend is distributed over a pit feed and fed to second Super Picker, from which it is conveyed to card room.



Fully Automatic System. Employs a number of automatic feeds with calibrated scale mechanisms, each laying one kind of stock on feed table of first Super Picker. Blend passes through re-blending box to wide Super Picker and then to card room.

Proctor textile engineers have developed many highly efficient blending systems for the continuous laying of blends or mixes of wool, cotton, rayon, asbestos, jute and other fibrous materials, preparatory to carding and spinning into yarns, or to garnetting into batt form. The continuous blending systems, illustrated above, are a development of the work done by the Proctor Super Picker and are based on the high productive capacity of this machine. This picker has a rated output of 4,000 to 6,000 pounds per hour. As can be readily observed, these blending systems can be semi or fully automatic, depending upon individual plant production requirements. The systems are entirely flexible and can be arranged to meet individual plant layout. Plants already operating similar systems report amazing production figures. If blending is a part of your plant operation—you owe it to yourself to investigate the details of Proctor continuous blending systems. Let one of our sales engineers discuss your problem and make recommendations. Write today!

P&S

PROCTOR & SCHWARTZ · INC ·

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KINKS & SHORT CUTS

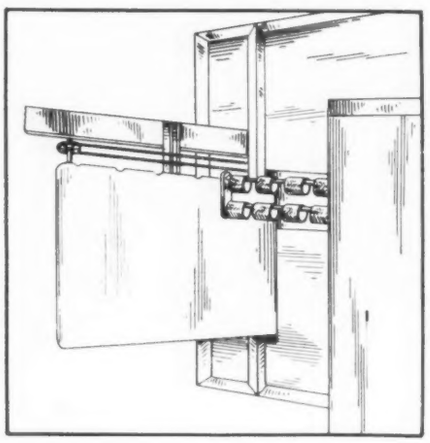
(Continued from page 166)

the cakes in our conveyor-type skein dryer. We simply added hangers and a second, lower, rod to the usual rods used for holding skeins and thus were able to run two rows of cakes through where formerly we had run one skein.

The increase was most necessary, because it takes much longer to dry cakes than cones; and we would not have been able to dry all the cakes necessary if we had not resorted to this practice.

We do not recommend this as a permanent solution, as we are looking forward to receiving a dryer especially for cakes. The arrangement is quite suitable now, since sometimes we need to dry both cakes and skeins.

When this is necessary, we set the dryer to the proper speed for handling the skeins and then merely put through the cakes repeatedly until they are dry. *(K-426)*

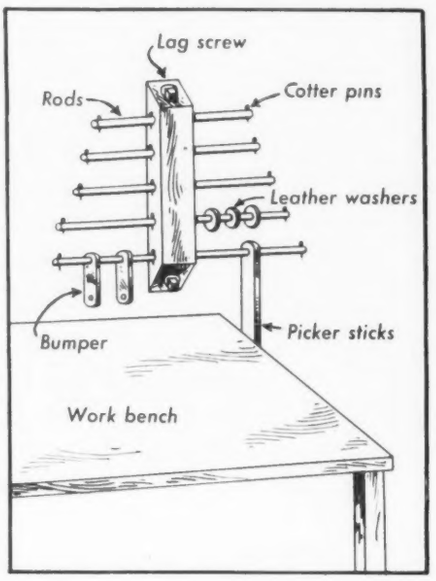


The bottom poles are shorter than the top so that they pass the side aprons satisfactorily.

Rack For Small Parts Built Above Workbench

In some plants it is the custom to place weekly supply needs on the fixer's workbench. Where such practice prevails, the easy-to-make rack shown in the accompanying sketch provides plenty of space for such items as lug straps and sticks, picker sticks, pickers, hold-ups, and other often-required parts. The rack is made of a short length of 2x4-in. lumber with suitable holes drilled for holding the supporting rods. The rack is placed on the wall over the workbench.

The supporting rods are spaced so that each lower rod is slightly longer than the one above it. Cotter pins keep the rods in place. On each rod end a pin is placed to keep the supply parts from sliding off as a result of vibration. It is a simple task to check on weekly needs and replace the items that are most often used. *(K-440)*.



The rack is fastened to the wall directly above the workbench.

Door Maintenance Reduced With Bumpers

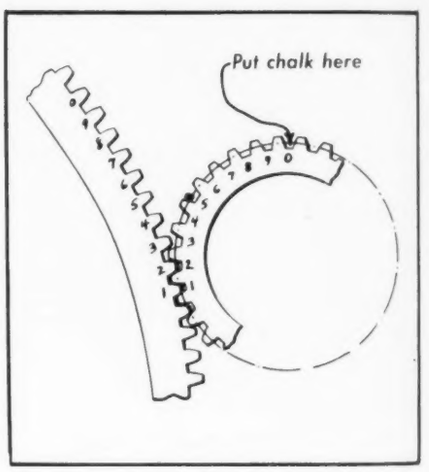
A lot of trucking from one department to another is done in our plant, and considerable trouble formerly resulted from the boxes being pushed against the swinging doors to open them. Frequent maintenance work was required to keep the doors on the hinges.

Our trouble was solved by placing bumpers made of maple wood on the doors. The bumpers were made in a triangular shape with the corners rounded off, as shown in the sketch. This construction made opening the doors easier and reduced the shock when boxes were pushed against them. Door maintenance work was greatly reduced. *(K-431) Richard Dilworth, Pawtucket, R. I.*

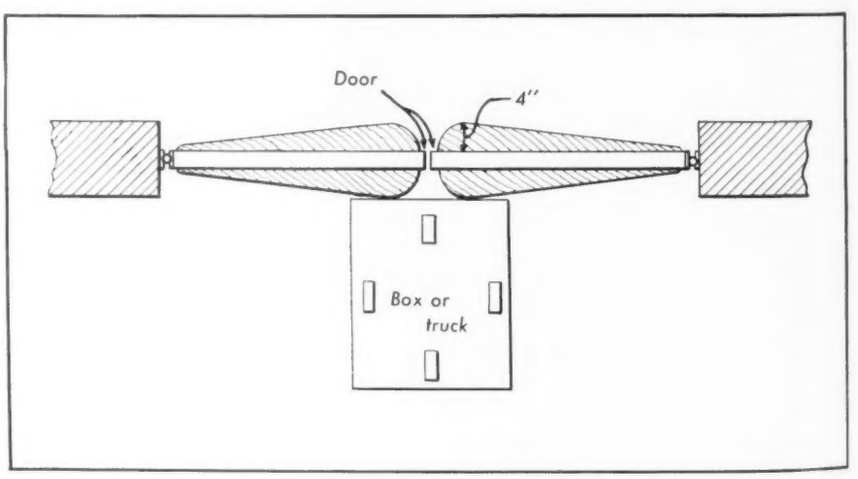
Knitting Machine Time Indicated With Chalk

In order to obtain the correct knitting motion, it is customary to mark mating teeth of gears and pinions with zeros. It is often difficult, and sometimes impossible, to see these zero marks after the machines have been completely assembled, particularly if the gear or pinion is oily.

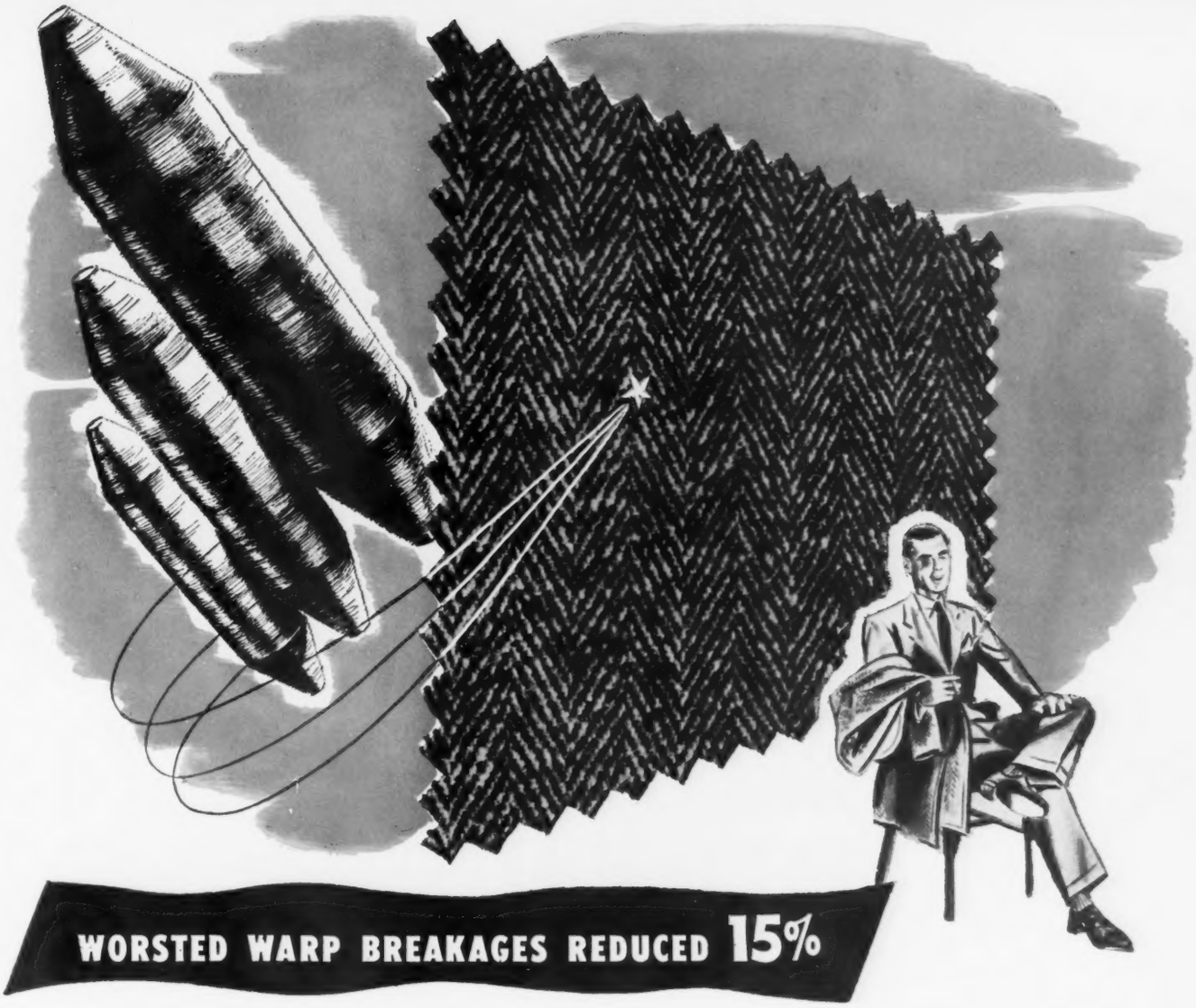
A simple and effective method of checking the timing of the gears and pinions is to put a small amount of powdered white chalk in the zero mesh of the gear. Turn the machine until the zero mesh of the gear has passed the



Chalk placed in the zero mesh of the gear will leave a mark on the pinion-gear tooth.



The bumpers are 2 in. wide and 4 in. thick at their thickest points. The above sketch is exaggerated for clarity.



WORSTED WARP BREAKAGES REDUCED 15%

NALEX is a worsted warp sizing starch that greatly increases the tensile strength of worsted yarns. It has increased weaving efficiency in leading mills from 10% to 15% — over ordinary warp sizing.

Why? NALEX has eliminated many operating difficulties with its chemically controlled viscosity and cohesiveness. The vagaries of nature — the caprices of weather and soil so often reflected in less fully processed warp sizes — have been refined out of NALEX.

— as a result, NALEX sizes with greater uniformity . . . penetrates deeper . . . adheres all loose fibers securely . . . and forms a strong, smooth continuous film on the yarns to attain maximum elasticity — and greatly reduce warp breakages.

NALEX is colorless, nearly transparent. It retains the full depth of shade in bright colored yarns. It is also being widely used for fine combed cotton yarns, carded cotton yarns as well as worsted yarns of all types.

NALEX is readily available at savings from $500 to $1,000 a carload over ordinary warp sizes. Ask for a trial demonstration. A National technician can run off a few beams without upsetting your regular production.

National also produces: KOVAT, a cold water swelling gum for all textile printing; FLOJEL, uniform, thin boiling corn starches in all standard fluidities; HOOSIER Pearl Cornstarch; FIBERTEX for textile finishing; and AMBERTEX, a heavy-bodied thickener for white discharge, direct and vat color printing.

Offices: 270 Madison Avenue, New York 16; Boston, Philadelphia, Chicago, Indianapolis, San Francisco and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In Holland: Nationale Zetmeelindustrie, N. V., Veendam.

ARMY-NAVY E
Dunellen Plant

National
STARCH PRODUCTS

STARCHES — AND SPECIALTIES WITH EASILY DEMONSTRATED SUPERIORITY

KINKS & SHORT CUTS

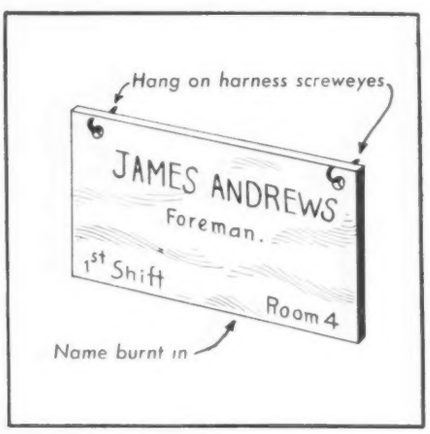
(Continued from page 168)

pinion. Some of the chalk from the mesh will be deposited on the pinion-gear tooth, and it can readily be seen whether or not the teeth are meshing properly. *(K-434) Walter A. Simond, Franklin, N. H.*

Mill Uses Name Plates To Aid Identification

One large textile mill the writer knows of has recently introduced the name-plate idea into all its departments. The idea appears to have some merit, especially where workers have been shifted from one department to another and are unfamiliar with their fixers, foremen, etc.

Names can be burned into plywood plates or painted on glass. The plates should be attached to desks, benches, or other pertinent locations by means of hooks or screws so that an exchange of plates can be made any time the need arises. *(K-439).*



Name plates for supervisors are an aid to the memory of a new worker.

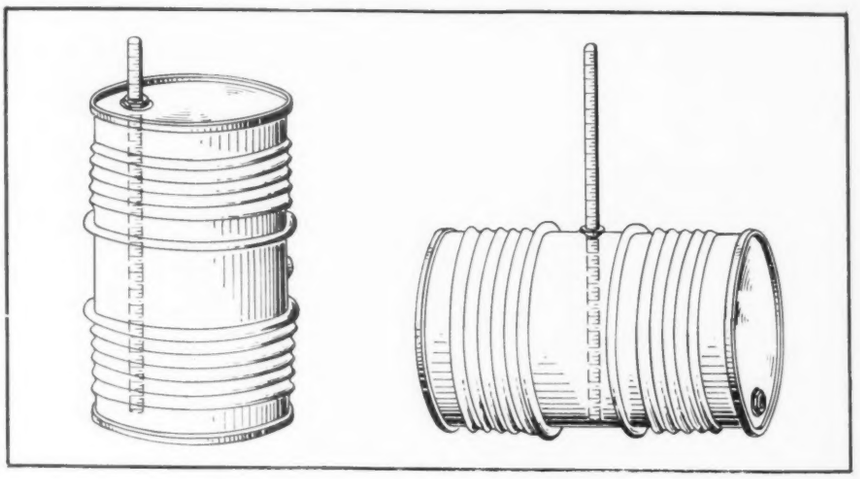
Contents of 55-Gal. Drum Measured With Yard Stick

The accompanying charts, published by U.S.I. Chemical News, should prove useful to mills which have occasion to estimate the contents of a partially filled 55-gal. drum. The number of gallons for each inch of liquid content are given over a temperature range from 10° F. to 70° F.

The charts were compiled from measurements of 188 and 190 proof Ethanol in standard ICC-17E drums (35 x 24-in.). For other liquids similar to Ethanol, these quantities will be approximately correct. (K-436)

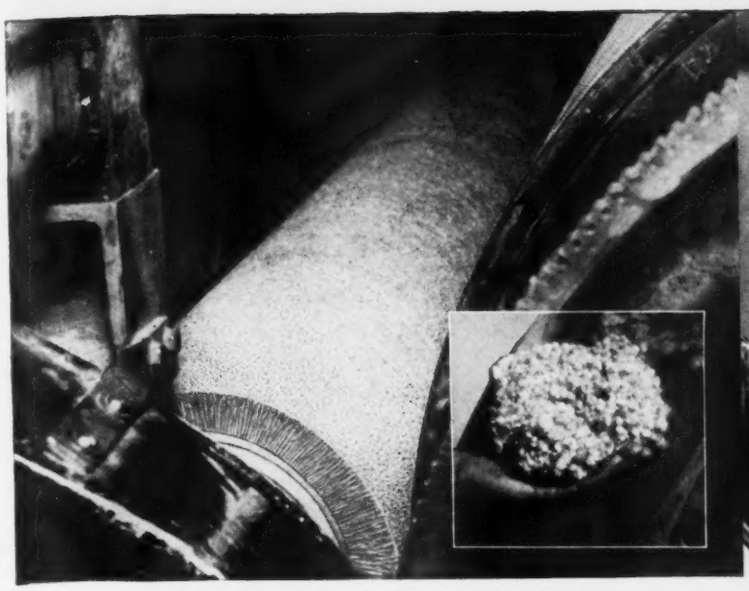
VERTICAL

Wet Inches	70° F	60° F	50° F	40° F	30° F	20° F	10° F
31	53.5	53.8					
30	51.7	52.0	52.3	52.6	52.9	53.3	53.6
29	50.1	50.3	50.6	50.9	51.2	51.5	51.8
28	48.3	48.6	48.9	49.2	49.4	49.7	50.0
27	46.6	46.9	47.1	47.4	47.7	48.0	48.3
26	44.9	45.1	45.4	45.7	45.9	46.2	46.5
25	43.2	43.4	43.7	43.9	44.1	44.5	44.7
24	41.5	41.7	41.9	42.2	42.4	42.7	42.9
23	39.6	39.9	40.1	40.4	40.6	40.8	41.1
22	37.9	38.2	38.4	38.6	38.8	39.1	39.3
21	36.2	36.4	36.7	36.9	37.1	37.3	37.5
20	34.5	34.7	34.9	35.1	35.3	35.5	35.8
19	32.8	33.0	33.2	33.4	33.6	33.8	34.0
18	31.1	31.3	31.5	31.7	31.8	32.0	32.2
17	29.4	29.6	29.7	29.9	30.1	30.3	30.4
16	27.6	27.7	27.9	28.1	28.3	28.4	28.5
15	26.0	26.1	26.3	26.4	26.6	26.7	26.8
14	24.2	24.3	24.4	24.6	24.7	24.9	25.0
13	22.4	22.6	22.7	22.8	23.0	23.1	23.2
12	20.7	20.8	20.9	21.1	21.2	21.4	21.5
11	19.0	19.1	19.2	19.4	19.5	19.6	19.7
10	17.2	17.3	17.4	17.5	17.6	17.7	17.8
9	15.5	15.6	15.7	15.8	15.9	16.0	16.0
8	13.8	13.9	14.0	14.0	14.1	14.2	14.3
7	12.1	12.1	12.2	12.3	12.4	12.4	12.5
6	10.4	10.4	10.5	10.5	10.6	10.7	10.7
5	8.7	8.7	8.8	8.8	8.9	8.9	9.0
4	6.9	7.0	7.0	7.1	7.1	7.2	7.2
3	5.1	5.2	5.2	5.2	5.3	5.3	5.3
2	3.4	3.4	3.4	3.5	3.5	3.5	3.5
1	1.7	1.7	1.7	1.7	1.7	1.8	1.8



HORIZONTAL

Wet Inches	70° F	60° F	50° F	40° F	30° F	20° F	10° F
20	54.3	54.7	55.0	55.3	55.6	55.9	
19	52.1	52.5	52.7	53.1	53.3	53.7	54.0
18	49.7	50.0	50.3	50.6	50.9	51.2	51.5
17	47.1	47.4	47.6	47.9	48.2	48.5	48.8
16	44.3	44.5	44.8	45.1	45.3	45.6	45.9
15	41.2	41.5	41.7	42.0	42.2	42.5	42.7
14	38.1	38.4	38.6	38.8	39.0	39.2	39.5
13	34.9	35.1	35.3	35.5	35.7	36.0	36.2
12	31.6	31.8	32.0	32.2	32.4	32.5	32.7
11	28.3	28.4	28.6	28.8	29.0	29.1	29.3
10	25.0	25.1	25.3	25.4	25.6	25.7	25.8
9	21.6	21.8	21.9	22.0	22.2	22.3	22.4
8	18.4	18.5	18.6	18.7	18.9	19.0	19.1
7	15.3	15.4	15.5	15.6	15.7	15.8	15.8
6	12.3	12.3	12.4	12.5	12.6	12.6	12.7
5	9.5	9.5	9.6	9.6	9.7	9.7	9.8
4	6.8	6.8	6.9	7.0	7.0	7.1	7.1
3	4.4	4.5	4.5	4.5	4.5	4.6	4.6
2	2.4	2.4	2.4	2.5	2.5	2.5	2.5
1	0.8	0.8	0.8	0.8	0.8	0.8	0.8



Typical Fuller-Gript application on a Worsted Card

THE BRUSHES YOU NEED ARE MADE BY THE MILE

Your needs for Worsted card brushes, Morel brushes, feed roll brushes, transfer brushes and many other wool machinery uses can best be met by Fuller-Gript. These brushes are made by a most advanced method in which the mass of brushing material is held in a grip of steel to produce a continuous formation of uniform density.

The brush strip is then formed to fit the process. It may be in straight lengths, or spiraled in close formation to give desired bristle density.

The result is longer life and better performance on all processes.

There is a Fuller industrial brush representative in most territories. He will be glad to call to study your anticipated brushing problems, and assist you in establishing specifications for the best brush for the job.

For fulfillment of your immediate needs, write, wire, or phone your specifications direct to Hartford.

Fuller-Gript

BUILT-TO-ORDER BRUSHES FOR YOUR EQUIPMENT

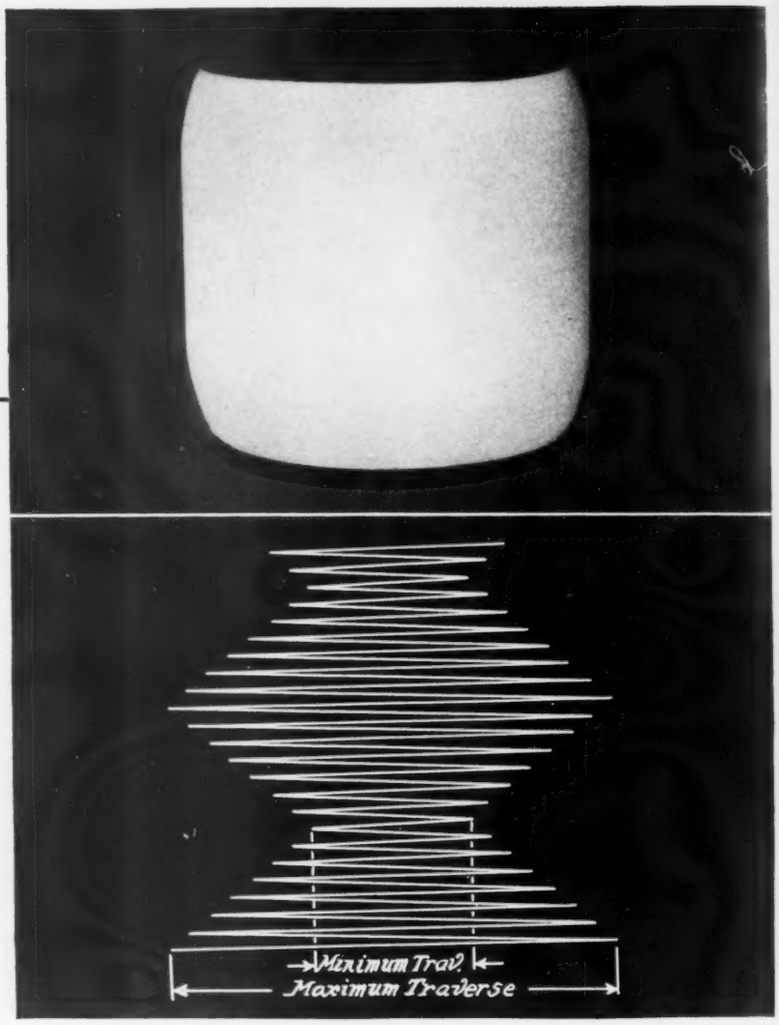
Unique and versatile construction. Brush material held in vise-like grip by a continuous metal strip that can be coiled or formed to any desired shape.

THE FULLER BRUSH COMPANY

INDUSTRIAL DIVISION

3594 FULLER PARK, HARTFORD 2, CONNECTICUT

HOW TO MAKE NYLON BEHAVE

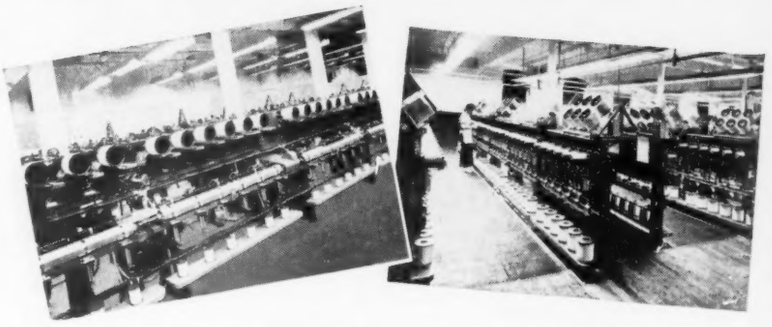


Experience in throwing mills has proved that the Universal Sizing Tube is the most satisfactory supply for the coning machine... permitting highly-elastic nylon yarn to deliver freely on the coning machine *without an intermediate redraw operation.*

A unique method of traversing the yarn is responsible for the superior shape of the tube. A special heart-shaped cam on the Universal No. 250 Sizing Machine lays the yarn on the large-diameter tube with alternately long and short traverses, building a package with tapered selvedges.

Mills operating Universal Sizing Machines also use the Universal No. 50 Coning Machine to build pineapple cones which are considered the ideal shape of package for supplying knitting machines with nylon yarns.

Both machines have been designed so that the yarn travels in almost a straight line, past a minimum of contact points and with minimum change in yarn speed—thus limiting variations in tension which might affect the quality of the knitting.



Universal Sizing and Coning Machines at Atlantic Rayon Corporation's Plant in Lowell, Mass.

Universal Winding Company

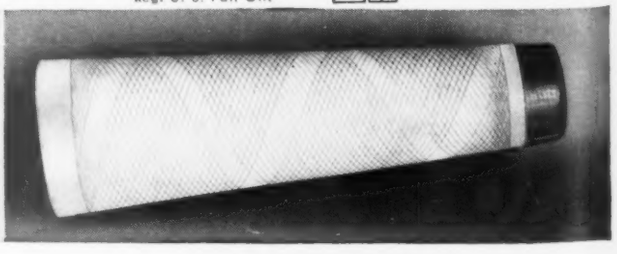
SEESONA

Reg. U. S. Pat. Off.

PROVIDENCE
BOSTON
PHILADELPHIA
UTICA
CHARLOTTE
ATLANTA

23-5-5

MORE THAN 90% OF ALL SYNTHETIC FILAMENT YARN ON CONES IS PRECISE-WOUND ON THE FLEXIBLE 50



LETTERS to Pete & Bill, discussing material in this department, are paid for when published. Suggestions for the Pete & Bill dialogue will also be paid for if used. If these pages interest you, contribute something to interest others. Address PETE & BILL, Textile World, 330 West 42nd St., New York 18, N. Y.

Pete & Bill

The Mill Door—Closed or Open?

Should supervisors be encouraged to visit other mills and, if so, should outside mill-men be welcomed for inspection of your manufacturing processes?

YOU REMEMBER OLD MAN JACKSON, WITH OUR FRIENDS DOWN THE VALLEY? WELL, HE LET ME VISIT HIS DEPARTMENT YESTERDAY AND SHOWED ME HIS NEW CONTINUOUS-PROCESS SET-UP
THAT OLD SCROUGE! YOU'LL HAVE HIM NOSING AROUND HERE BEFORE YOU GET THROUGH.
1
I WOULDN'T HOLD OPEN HOUSE FOR EVERYONE BUT I'D LET ANY INTERESTED MILL MAN SEE MY SET-UP. JUST DISCUSSING IT WITH HIM, MIGHT GIVE ME SOME NEW IDEAS AND AN OUTSIDE VIEWPOINT.
ANY LITTLE SHORT-CUT YOU HAD WOULD BE ALL OVER THE STATE IN A WEEK. WE'D LOSE THE EDGE WE'VE GOT NOW.
2
COPYISTS CAN ONLY COPY, BILL. IF WE CAN'T STAY AHEAD OF OUR COMPETITION WE MIGHT AS WELL CLOSE UP NOW.
BUT YOU'RE GOING TO DEVELOP THAT CONTINUOUS PROCESS JACKSON LET YOU IN ON. YOU'RE A COPYIST YOURSELF.
3
NO, BILL. OUR PROBLEM'S QUITE DIFFERENT. IT'S ONLY IDEAS I'M AFTER. I'M FOR RECIPROCITY. I CAN IMPROVE MY KNOWLEDGE WHETHER I'M VISITING OR BEING VISITED. EH? JOE?
THE SUBJECT'S LOADED, FELLERS. I WOULDN'T KNOW HOW TO ORGANIZE IT. COME READERS, YOU TELL US ABOUT YOUR ATTITUDE ON VISITING.
4

Letters From Readers

Some Workers Find Joy in Giving

"The Annual Christmas Problem"
(Pete & Bill, Dec. 1945)

Dear Pete & Bill:

As a recipient of a gift by my employees, I'm really sure it wasn't graft or given to me for some reason along those lines. I am quite certain that it came from their hearts as a token of good cheer.

I too heard through the grapevine that I was to receive said gift, but when I was presented with it, I made sure to register surprise. As I peered up from the gift, I saw a group of happy faces, and I knew then that each and every one who had contributed toward the gift did it on their own free will, and never gave a thought of the money involved.

The gift in itself told me that my employees were satisfied with the way I had handled them the past year, and if it had been a 10¢ pin from 10 employees who each had contributed 1¢, I would have been just as thrilled.

A boss should show no favoritism in his department. Every one in the department should be equal. If they want to give a gift to the foreman, each and everyone should give the same amount. They'll all pull together. (PB203)

Did You Give a Present to Your Boss?

"The Annual Christmas Problem"
(Pete & Bill, Dec. 1945)

Dear Pete & Bill:

Sorry, boys, but I think you are both wrong. The only honest limit on contributions is zero—yes, nothing.

You may be so good an executive, Bill, that your men appreciate the all-too-rare occasion of working for you. They may wish to let you know their pleasure at having a good boss. But

isn't that simply the job that your employer hired you for? Haven't you an obligation to your own boss to be a good boss?

I know, Pete, that all your people will feel obligated to give the 25¢, even though you are not the apple of their eye. Besides someone might tell you that I, whom you thought could afford it, hadn't contributed.

Incidentally, am I wrong in supposing that you both did NOT give a gift to your superintendent this Christmas? (PB204)

Beware of Gift Bearers

"The Annual Christmas Problem"
(Pete & Bill, Dec. 1945)

Dear Pete & Bill:

As an overseer of dyeing for over 20 years, I am strictly opposed to the help giving Christmas presents to "the boss." Any boss who is a regular fellow does not expect a present and does not want one.

At one time I worked in a mill and heard quite a few of the finishing room help cursing the boss finisher every day. Then at Christmas a few started to collect for a present. Of course everyone gave their donation; not that they felt like it, but because they did not want to be called cheap. In this particular case the old axiom applies: "Beware of Greeks bearing gifts." (PB205)

Training Aids Efficiency

"Training for Older Help"
(Pete & Bill, Aug. 1945)

Dear Pete & Bill:

An employee who works for a reputable organization does not wait long for a chance at schooling. The management in such a concern periodically prepares such a program with an eye toward furthering better understanding between labor and management.

The application of aptitude tests is of a highly beneficial nature since it points out to the employer the caliber of each employee. Added to that, the faults and misunderstandings of each worker are brought to the fore and can be corrected wherever and whenever possible. The appreciative man who relishes constructive criticism is thereby elated, and can more readily put his heart and soul into working for an interested employer.

Management strives for efficiency. Efficiency lies in the hands of labor. Labor will be efficient with management only when management is efficient with labor. There is no question, therefore, but that training for the older help is the key to keeping a smooth and efficient line of production. Toward such a goal is management pledged. (PB206)

Setting Up an Office Management System

BUSINESS ORGANIZATION AND PRACTICE, by Edwin M. Robinson; McGraw-Hill Book Co., 330 West 42nd St., New York 18; 544 pages; $3.00.

Fundamentals of good business organization and sound management practice which may be applied to any business, regardless of size, are advocated by this book. Any mill executive interested in streamlining his office may find this book interesting reading in that it starts first from the financial structure of an organization and continues through all divisions to and including manufacturing. Latest improved methods are given and are illustrated with actual case histories. Subjects covered include: organization of personnel, office management, office service, administration and control, accounting, sales and advertising, handling sales orders, credit management, purchasing, traffic management, and production.

History of Linen

THE STORY OF LINEN, by William F. Leggett; Chemical Publishing Co., Inc., 26 Court St., Brooklyn 2, N. Y.; 103 pages; $2.75.

A brief history covering the development of weaving of linen and the spinning of flax by the early Egyptians and through later periods by the Greeks, Romans, French, Irish, English, etc., and finally to the early colonial settlers in this country, has been woven by the author in this small, but interesting book.

Developments in Field of High-Polymer Fibers

ADVANCING FRONTS IN CHEMISTRY—Vol. I. High Polymers, edited by Sumner B. Twiss; Reinhold Publishing Corp., 330 West 42nd St., New York 18; 182 pages; $4.00.

Textile chemists will find this collection of lectures, which were a part of a "Symposium on High Polymers," held at Wayne University in the spring of 1944, of assistance in obtaining a better understanding of the development, the characteristics, and the reactions of high polymers for textile fibers. The early chapters provide a foundation for a chemist, permitting him to digest the material in the later sections. Fibers such as nylon, Saran, Velon, Styrene, and others are considered. Included in the collection is a paper by H. F. Marks and one entitled, "Some Concepts of Textile Fibers," by Milton Harris.

Aid to Engineers in Humidifying Problems

VAPOR ADSORPTION, by Edward Ledoux; Chemical Publishing Co., Inc., 26 Court St., Brooklyn 2, N. Y.; 354 pages; $8.50.

With textile engineers having to consider humidifying, evaporative cooling and air-conditioning problems, it is advisable that they have a sound understanding of the basic principles and calculations involved so they can check and estimate the resulting humidities and evaporative-cooling possible to be obtained. This book deals with the physical and physico-chemical background of absorption, heat transfer, and saturation of air as related to industrial applications. The section devoted to industrial applications covers dehumidification, refrigeration, and forced-draft low-temperature drying.

Other Publications

HOW TO TRAIN YOUR ASSISTANTS, by Richard W. Wetherill; National Foremen's Institute, Inc., Deep River, Conn.; 20 pages; 25¢.

WHAT THE FOREMAN NEEDS FOR SUCCESS; National Foremen's Institute, Inc., Deep River, Conn.; 16 pages; 25¢.

ORGANIZATION OF TECHNICAL RESEARCH IN INDUSTRY: Industrial Research Institute, Inc., 60 East 42nd St., New York 17; 15 pages.

VITAL STATISTICS ON THE SOUTH AMERICAN REPUBLICS; Pan American Society of Tropical Research, Casilla 325, Quito, Ecuador, South America; 4 pages.

TOWARD BETTER LABOR-MANAGEMENT RELATIONS IN NEW ENGLAND; The New England Council, Statler Building, Boston, Mass.; 20 pages.

PERSONNEL PROBLEMS AND PRACTICES FOR THE ERA AHEAD; (A summary of the 25th Annual Conference on Human Relations in Industry); Young Men's Christian Association, 609 Standard Bldg., Atlanta, Ga.

DAY-LINE*

The "ONE-MAN" *Fixture*

This heavy-duty Day-Brite Industrial Fluorescent system saves time and money on every installation —every service operation:

- One man *alone* can quickly hang the Day-Line with chain or patented Day-Brite "Ice-Tong" hangers.
- Rugged, die-formed steel channels designed for simplified unit or continuous mounting—plenty of knockouts.
- Lifetime porcelain enameled steel reflectors fastened with two captive wing nuts can be removed and replaced in one minute for easy installation and servicing—*without tools.*

Day-Brite Lighting, Inc., 5455 Bulwer Avenue, St. Louis 7, Mo. Nationally distributed through leading electrical supply houses.

In Canada: address inquiries to Amalgamated Electric Corporation, Ltd., Toronto 6, Ontario.

* Patent Nos. 2317434, D135373, D133458

944

IT'S EASY TO SEE WHEN IT'S

DAY-BRITE *Lighting*

NEWS ABOUT Suppliers

Saco-Lowell Shops, Boston, Mass., has named as vice president John S. Chafee, formerly a vice president of Brown & Sharpe Mfg. Co., Providence, R. I. He will work closely with and assist the president in the general management of the Saco-Lowell business. Mr. Chafee has served as president of the National Machine Tool Builders Association, and during the war was director of the Tools Division of WPB.

H. W. Butterworth & Sons Co., Philadelphia, Pa.—Frederick N. Spoerl has returned to this company after a leave of absence of over five years. During this period, Colonel Spoerl has been stationed at headquarters of the Signal Corps Engineering Laboratories, Bradley Beach, N. J., as

DR. ROBERT REINER, of Robert Reiner, Inc., Weehawken, N. J., congratulating one of the ten employees of his company who have served 10 or more years. He presented each of these workers with a suitably engraved watch.

contracting officer and administrative executive officer. Prior to his entrance into the Armed Forces, he was manager of the New England District for Butterworth with offices in Providence, R. I. He will resume his duties in a sales-engineering capacity, working from the Philadelphia, Pa., office.

John Hetherington & Sons, Inc., Boson, Mass., has reappointed Thomas M. Brockman, Jr., who returned recently after 29 months in the Navy, to the position of Southern representative of the firm which he held before entering the Service. He has opened offices at 236 West Airline Ave., Gastonia, N. C.

Whitinsville Spinning Ring Co., Whitinsville, Mass., has appointed Joseph H. Windle, Jr., as Southern agent. His father was for many years sales agent for Woonsocket Machine & Press Co., Fales & Jenks, and Easton & Burnham Machine Co. Mr. Windle, Jr., had 2½ years engineering and design work with the Grinnell Co. and Combustion Engineering Co. before three years service in the Navy from which he has just been discharged.

U. S. Textile Machine Co., Scranton, Pa., is now located at its new plant at 411 Gilligan Street, Scranton 8, Pa., in larger quarters and with expanded facilities to triple production.

Lombard Machine Co., Inc., Providence, R. I., manufacturer of the patented Peralta machine has changed the company name to Duesberg-Bosson of America, Inc.

John Walron Corp., New Brunswick, N. J., has added to its staff Arthur Gaio, recently released from the Navy after having commanded a mine sweeper in the Pacific. Prior to entering the service, Mr. Gaio was engaged in plastics research with Chrysler Corp. Engineering Laboratories, and he will continue his work in the plastics field with Waldron.

F. A. Lazenby & Co. have removed their office and factory to new and modernized quarters at 3106 Elm Ave., Baltimore 11, Md.

Steel Heddle Co. of Canada, Ltd., general offices and plant at Montreal, Canada, celebrated their tenth anniversary last month. J. W. Elliott, general manager of the plant, has been with the organization since its origin, having previously gained his experience by working in every department at the Philadelphia plant of the Steel Heddle Mfg. Co. There are also five employees who have served continuously since the firm was founded.

James Talcott, Inc., New York, has elected Sigurd B. Salvesen as an assistant vice president. He has been with the corporation for 21 years.

Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J., has appointed J. H. McMurray as an assistant manager. He has been with Calco for many years, lately as director of engineering and construction. F. B. Havens, formerly vice president and chief chemist for Prince Mfg. Co., Bowmanstown, Pa., has been added to Calco's technical service staff to specialize in application of pigments to protective and decorative coatings. Calco has appointed Don H. W. Felch as manager of the new Willow Island, W. Va., plant. Construction at the site has begun. Initial manufacturing buildings, warehouse, and steam plant will cost approximately $3,000,000.

H & B American Machine Co., Pawtucket, R. I., has set up a cooperative insurance program for its employees which includes not only life insurance, but coverage on accidental dismemberment, sickness, accident, hospitalization, surgical fees, etc.

Morris Speizman Co., Charlotte, N. C.—Capt. Ted A. Valenstein, who has returned from duty in the South Pacific, plans to resume his duties with this company in the near future.

Sam Schwarz Machinery Co., Charlotte, N. C., is the new name of the business formerly operating as Textile Salvage Co.

Consolidated Products Co., New York, N. Y.—B. W. Ross, who served 3½ years in the Army, has returned to his duties as sales engineer with Consolidated. James J. Flannery, who served for three years in the South Pacific, expects, upon his release, to return to his duties in the sales staff.

National Starch Products Inc., New York, has appointed S. F. "Woody" Thune as manager of their New England Division with headquarters at 15 Elkins Street, South Boston 27, Mass. He has been with the organization for 12 years, lately with the Midwestern Division where he was manager of adhesives sales.

B. F. Goodrich Chemical Co., Cleveland, Ohio, has established New York offices in the French Building, 45th St. at Fifth Ave. O. E. Isenburg and R. F. Dettelbach are sales representatives at this office for Geon polyvinyl materials; Jack H. Rines, Philadelphia reclaimed rubber sales; Roger Bascom, Hycar synthetic rubber sales. A new Chicago office has been established in Room 1119, Field Building, with Clyde Segner, handling Geon sales in that area, in charge. John R. Hoover, formerly general sales manager of plastic materials, has been promoted vice-president in charge of sales. Allyn I. Brandt, formerly general sales manager of rubber chemicals, becomes general sales manager of all chemical company products sold domestically.

New York & New Jersey Lubricant Co, New York, N. Y., maker of Non-Fluid Oil, is celebrating its golden anniversary this year. It began business on Apr. 21, 1896.

Monsanto Chemical Co., St. Louis, Mo., has employed Nate L. Crabtree, formerly an advertising agency executive, to assist in merchandising its textile

(Continued on page 258)

Westinghouse Elects Gwilym A. Price President

Westinghouse Electric Corp., East Pittsburgh, Pa., has elected Gwilym A. Price as president, succeeding George H. Bucher, who has resigned from that office. Under a recent amendment of the corporation's bylaws, Mr. Price as president will be the chief executive officer.

A. W. Robertson, who as chairman has been the corporation's chief executive officer since 1929, has reached retirement age. He was elected chairman of the board of directors under the new bylaws and will continue as a member of the Westinghouse organization in a less active capacity.

Mr. Bucher was elected vice chairman of the board and will continue to serve as chairman of the Westinghouse Electric International Co., which handles all export business of the parent company, and will have other active duties.

Mr. Price resigned as president of the Peoples-Pittsburgh Trust Co., of Pittsburgh, when he was elected a vice president of Westinghouse in September, 1943. He has been executive vice president since May, 1945. He was elected a member of the corporation's board in January, 1945.

Check up on QUADRAFOS . . . and check off PRODUCTION TROUBLES

FOR WET PROCESSING

(x) Improves detergency . . .
(x) Stabilizes emulsions and dispersions . . .
(x) Prevents precipitation of insoluble metallic soaps on processed materials . . .
(x) Dissolves lime soap deposits.

FOR RINSING

(x) Dissolves precipitated soaps and pectinates . . .
(x) Removes oils, waxes and finishes . . .
(x) Prevents gumming and spotting on material.

FOR DYEING

(x) Sequesters ions of heavy metals picked up from equipment or goods, or present in water supply . . .
(x) Prevents staining and dulling of dye colors . . .
(x) Promotes even dyeing by acting as a leveling agent.

FOR SIZING AND PRINTING

(x) Disperses and deflocculates dyestuffs, pigments and starches . . .
(x) Improves fluidity and film-forming characteristics of starch suspensions used in sizing warp yarns . . .
(x) Insures viscosity control of printing pastes employing sodium alginate or other gums.

FOR MANY OTHER USES

QUADRAFOS* the hard-working, glassy polyphosphate, means *better* textile products, in *shorter* time, for *less* cost.

Why not check the applications in which QUADRAFOS ($Na_6P_4O_{13}$) can be a time-saving, money-saving help for you . . . write Rumford for complete application details and samples. QUADRAFOS is available in both Granular and Bead Form.

QUADRAFOS

*U. S. Reg. Trade Mark for Sodium Tetraphosphate made by Rumford

RUMFORD CHEMICAL WORKS

11 NEWMAN AVE., RUMFORD 16, RHODE ISLAND

CLINTON

STARCHES

FOR ALL
TEXTILE PURPOSES

★

QUALITY
AND
SERVICE

★

CLINTON
COMPANY
CLINTON, IOWA

Round Table

FOR EXCHANGE OF IDEAS

The Round Table is designed to supply a meeting place where mill men can discuss problems among themselves. It is open to all readers for discussion of subjects relating to mill management and operation. Names of contributors to the Round Table will be held confidential if so requested, but sign contributions with your real name and address as evidence of good faith and to permit payment for items published. Address contributions to: Editor Round Table, Textile World, 330 West 42nd St., New York 18, N. Y.

Rayon Correction Factor Recommended for Table

On pages 100 and 101 in TEXTILE WORLD for December, 1945, is an article "Running Rayon on the Woolen System," together with a chart containing the diameters of wool fibers and also viscose and acetate fibers.

The fact is, as you well know, that the diameter of the wool fibers for wool grading, as used in the United States, and as shown in the table, is based upon microscopial or other similar comparisons of the observed diameter of the fibers in the particular grade. The method of examination is well established and approved.

However, in the various comparisons made using rayon, either viscose or acetate, the micron measurement regularly given is for a fiber of circular cross section based upon its specific gravity. The fact is that the ordinary rayon filament is not in a cylindrical form and, because of this fact, the average observed diameter in microns is actually larger than the cylindrical diameter in microns figured from the specific gravity.

Now, there actually is a difference in the amount of extra space or extra diameter, depending upon the size of the individual filament, embodied in

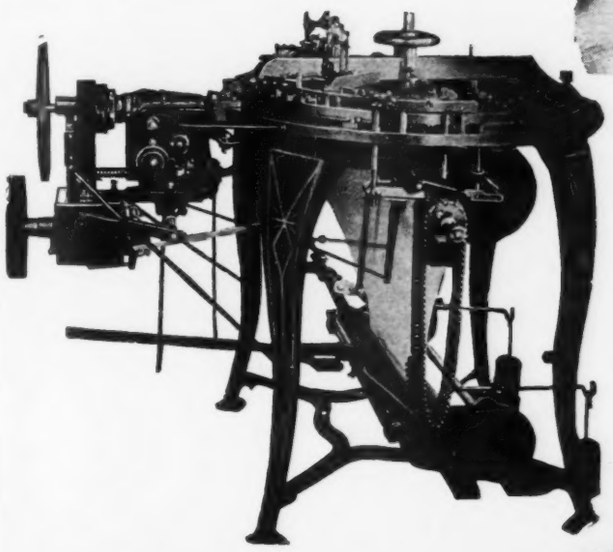
NOW-a Softer Fabric

IN LEIGHTON -KNIT SWEATERS

Brushed but NOT Washed.

Washed but NOT Brushed.

BRUSHED *and* WASHED.



Always—LEIGHTON Knitting Machines have excelled in producing soft-feeling sweater fabrics from ordinary or low-grade wool or worsted stock.

In seeking an *ultra-soft* effect, however, the LEIGHTON organization are now attaching brushing equipment to their Knitting Machines, and, with subsequent washing, producing sweaters with a soft, down-like finish comparable with that of the finest imported garments.

The LEIGHTON Knitting Machine is readily equipped for brushing, because the face of the fabric is *on the outside*—facing the operator.

Learn all about this latest development in LEIGHTON Knitting Machines. Write for full information on producing LEIGHTON Ultra-Soft sweater fabrics.

LEIGHTON MACHINE COMPANY
ESTABLISHED—1873

LEIGHTON

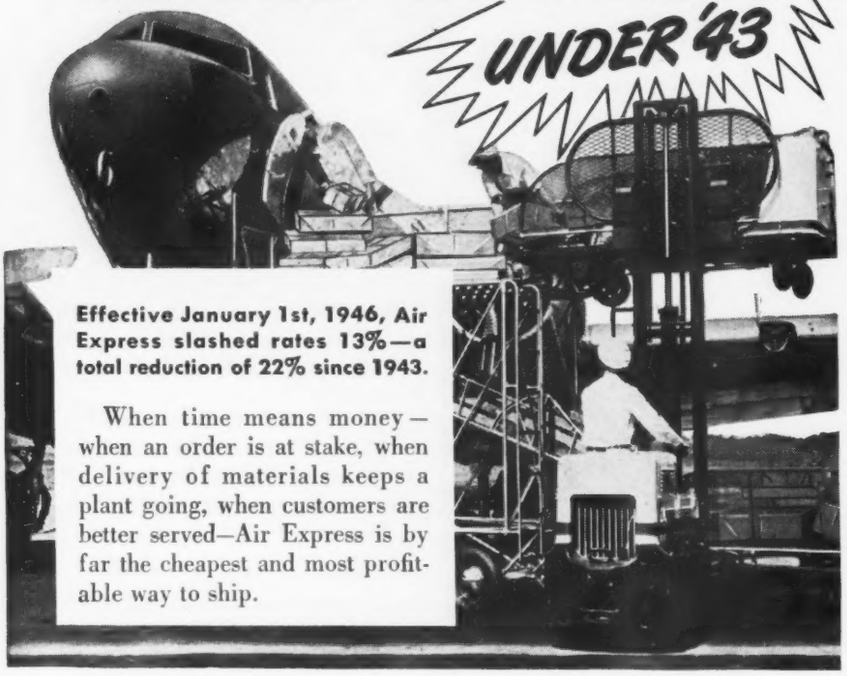
MANCHESTER NEW HAMPSHIRE
INCORPORATED—1894

SAVE TIME MAKE MONEY

SHIP by AIR EXPRESS

RATES CUT 22%

UNDER '43



Effective January 1st, 1946, Air Express slashed rates 13%—a total reduction of 22% since 1943.

When time means money—when an order is at stake, when delivery of materials keeps a plant going, when customers are better served—Air Express is by far the cheapest and most profitable way to ship.

Specify Air Express-a Good Business Buy

Shipments travel at a speed of three miles a minute between principal U. S. towns and cities, with cost including special pick-up and delivery. Same-day delivery between many airport towns and cities. Rapid air-rail service to and from 23,000 off-airline points in the United States. Service direct by air to and from scores of foreign countries in planes made in America, operated by American personnel and flying the U. S. flag.

HERE'S HOW LITTLE IT COSTS (U. S. A.)					
AIR MILES	2 lbs.	5 lbs.	25 lbs.	40 lbs.	Over 40 lbs. Cents per lb.
149	$1.00	$1.00	$1.00	$1.23	3.07
349	1.02	1.18	2.30	3.68	9.21
549	1.07	1.42	3.84	6.14	15.35
1049	1.17	1.98	7.68	12.28	30.70
2349	1.45	3.53	17.65	28.24	70.61
Over 2350	1.47	3.68	18.42	29.47	73.68

AIR EXPRESS

AIR EXPRESS

GETS THERE FIRST

Write Today for new Time and Rate Schedule on Air Express. It contains illuminating facts to help you solve many a shipping problem. Air Express Division, Railway Express Agency, 230 Park Ave., N. Y. 17. Or ask for it at any Airline or Railway Express office.

Phone AIR EXPRESS DIVISION, RAILWAY EXPRESS AGENCY
Representing the **AIRLINES** of the United States

circular and non-circular fibers. There is no one who contends that rayon filaments are round or cylindrical; but when tables are issued the observed

Wool and Viscose Observed Fiber Diameters

U. S. Standards				
Wool grade	Average micron width	Viscose denier	Average micron width	Diameter in inches
		1.0	11.7	1/2174
		1.3	13.9	1/1828
		2.0	16.5	1/1538
80s	19.45	2.5	18.4	1/1375
70s	20.07	3.0	20.2	1/1255
64s	21.86	3.5	21.9	1/1161
62s	23.52	4.0	23.4	1/1087
60s	24.70	4.5	24.8	1/1025
58s	25.78	5.0	26.2	1/971
56s	27.64	5.5	27.4	1/926
		6.0	28.6	1/887
		6.5	29.6	1/862
50s	30.04	7.0	30.6	1/831
		7.5	31.7	1/802
48s	32.55	8.0	32.7	1/776
46s	34.15	8.5	33.8	1/752
		9.0	34.8	1/730
44s	36.00	9.5	35.7	1/712
		10.0	36.6	1/695
40s	37.04	10.5	37.5	1/678
		11.0	38.4	1/661
		11.5	39.2	1/648
36s	39.80	12.0	40.1	1/634
		12.5	41.0	1/619
		13.0	41.8	1/607
		13.5	42.7	1/595
		14.0	43.7	1/581

Acetate Diameter 5% Larger

This table of fiber diameters was made up from a series of actual measurements. The author of the accompanying Round Table item has determined that the actual diameter of viscose-rayon fibers may be found by the formula: specific-gravity dia. ÷ 0.832 = actual dia.

6 MILLION YARDS OF CLOTH PER WEEK

now bleached faster, at lower cost with

Mill after mill acclaims the stand-out economy of this established process!

THIS WEEK—and week after week—about 6 million yards of many different types of cloth are being bleached rapidly, uniformly, economically, *continuously*—to a predetermined whiteness—with Du Pont Continuous Peroxide Bleaching Systems!

Bleacheries all over the country find these Du Pont bleaching systems mean greater savings, more profits. They yield continuous production. They allow different types of cloth to be run together. And they save steam, water, power, chemicals and labor.

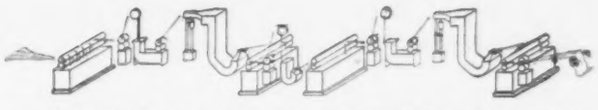
STUDY FOR YOURSELF the benefits you can derive from such a bleaching system in your plant! Whatever your needs, a Du Pont bleaching system can be designed to meet them. Du Pont Technical Service Men are ready to help you plan for necessary equipment as supplied by leading manufacturers.

FREE! ***Write on your business letterhead for copy of our illustrated book, "Du Pont Continuous Peroxide Bleaching Systems." This book will show you the way to modern bleachery savings and profits. Just address: E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.***

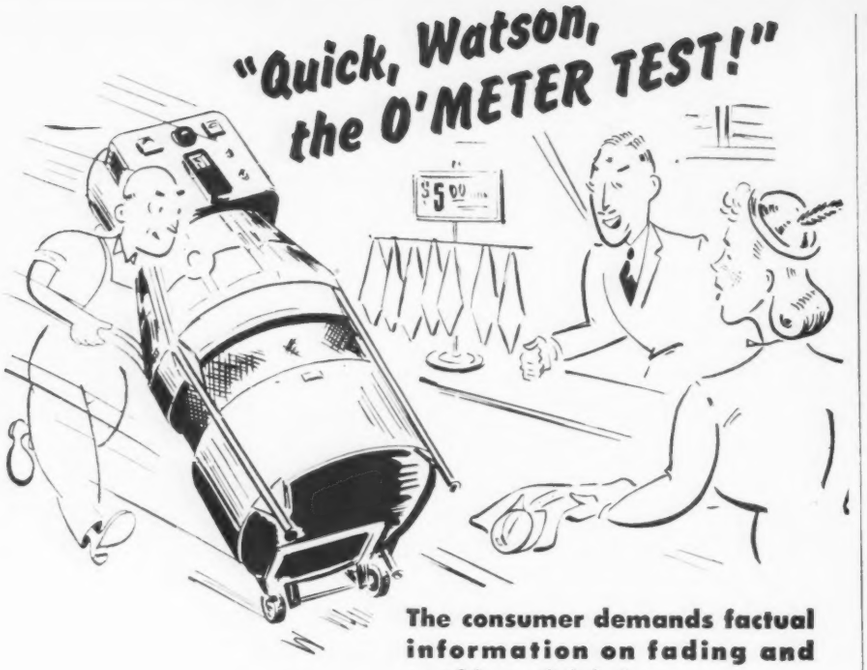
DU PONT PEROXIDES

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

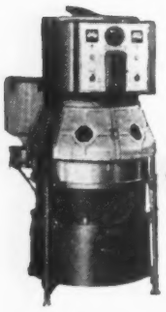


FLOW DIAGRAM OF DU PONT CONTINUOUS ROPE SYSTEM.



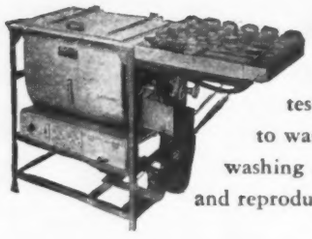
The consumer demands factual information on fading and washing of fabrics

- **FADE-OMETER**
- **LAUNDER-OMETER**
- **WEATHER-OMETER**



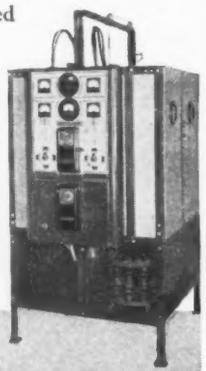
Enable the manufacturers of dyestuff and fabrics to guarantee the fading, washing and weathering qualities of materials.

FADE-OMETER— For over twenty-five years the yardstick of the textile and dyestuff industry for determining the light fastness of materials. Full automatic—safe to operate unattended over night.



LAUNDER-OMETER—The standard laboratory washing machine of the A.A.T.C.C. for testing color fastness, staining, shrinking, resistance to washing and mechanical action. All factors including washing action can be carefully controlled and reproduced identically at any time.

WEATHER-OMETER—Faithfully duplicates the combined weathering effects of sunlight, rain, heavy dew and thermal shock; accelerated to reduce years of actual weathering to a few days testing. Operates automatically without attention.



ATLAS ELECTRIC DEVICES CO.

361 W. Superior St., Chicago 10, Illinois

Originators and sole manufacturers for over a quarter of a century—Fade-Ometers, Weather-Ometers, Launder-Ometers; the accepted standard accelerated testing machines used all over the world.

diameter of wool fibers is compared with the specific-gravity diameter of rayon. They are not the same at all; and, inasmuch as in most instances fibers are observed microscopically, a readjustment figure has to be used in each instance in order to get the correct diameter. However, many persons do not realize that there is this difference and, therefore, make a comparison from the chart as it stands, which is incorrect.

I presume that you know all of the above and I merely want to go on record in opposition to this table because it is incorrect without the addition of a correction factor for the rayon. (*R-214*)

Notices Should Present Both Sides of Picture

Workers who resent bulletins and disregard posted notices may have what seems to them a very good reason, inasmuch as the bulletins and notices are written from the standpoint of mill management and are directed at getting more cooperation (which the employee interprets as meaning more work) out of the people in the department.

To offset this attitude, the subject matter of at least one notice out of every three should be entirely away from increased effort or improved efficiency and should concern matters of a general interest about the mill, such as its personnel, its products, and its future. The bulletin board offers an excellent opportunity for giving employees a knowledge of what goes on behind the scenes in a modern mill and for encouraging them to appreciate their positions and their importance in the industrial world.

Workers know they must be given some instructions through the bulletins and notices; but they also wonder, "Why shouldn't the notices sometimes concern me personally, instead of always playing up the problems of the management?" Progressive mill executives will be quick to meet the challenge of that question. (*R-215*)

The Long-Term Worker May Not Be the Best

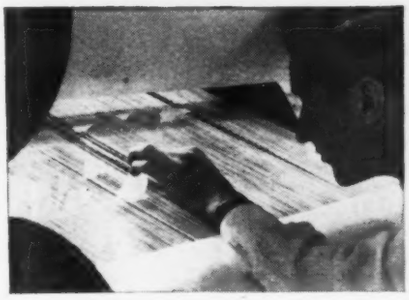
Credit is reflected on a foreman when he succeeds in keeping a lot of the workers on the job for long periods of service, and some foremen brag about how many employees have been working in their departments for five or ten years, or longer. It might be worthwhile to analyze the quality of the labor that has remained so long.

It doesn't help the mill if the inefficient workers and the trouble makers

RAYON REPORTS

Published Monthly by American Viscose Corporation, New York, N. Y. FEBRUARY, 1946

BETTER SERVICE TO THE TEXTILE INDUSTRY GOAL OF AVC RESEARCH REFRESHER COURSE



Warp ends of rayon yarn being inspected as they enter a two-bar tricot knitting machine . . . one of many full-sized machines in the AVC Textile Research Department at Marcus Hook, Pa.

To bring returning AVC veterans up to the minute on recent developments in rayon, "refresher" courses are now being conducted by The Educational Branch of the Textile Research Department at Marcus Hook, Pa. These courses, also open to executives of the company, cover a variety of subjects based on the background and objective of the individual trainee.

The principal aim of these courses, which last from one to four weeks, is to enable AVC personnel to render better service to the textile industry.

FIVE 1945 AD. CAMPAIGNS AVAILABLE IN BOOKLETS

Booklet-form reprints of five phases of AVC's 1945 advertising program are now available. Specific titles should be requested in writing to American Viscose Corporation, 350 Fifth Avenue, New York 1, N.Y. The booklets are:

"Reporting to our Neighbors"—advertisements addressed to AVC plant communities.

"Rayon Tells its Story to the Public"—a series showing how rayon, through research, grows constantly more important to our everyday life.

"'CROWN' Tested Merchandise Highlights"—a series addressed to both the public and the trade, featuring merchandise of CROWN Tested fabrics.

"True Stories About Untrue Ideas"—actual incidents in retail selling.

"'CROWN' Tested Case Histories of 1945"—addressed to the textile trade. They explain the CROWN Tested plan's operation, with examples of new fabrics brought out under the plan.

MARCUS HOOK EXPANSION

New spinning machines—and the refitting and modernizing of existing equipment—are the main objectives of a modernization program that AVC is carrying out as rapidly as possible at its Marcus Hook, Pa., plant, it has announced. The plant produces rayon yarns for men's and women's clothing, for home furnishing materials, and for tire cords.

FIVE-FOLD LINEAGE INCREASE

Advertising featuring "CROWN" Tested rayon fabrics, placed by retailers in daily and Sunday newspapers in 1945, increased five times over total agate lines run in 1944, according to reports of the Advertising Checking Bureau. The 1945 total of 1,705,382 lines compares with 369,432 in 1944, and 307,944 in 1943.

RAYON—20 YEARS AGO

Rayon from insect shells is news. Chitin, a substance from beetles and grasshoppers, and shells of crabs and lobsters, is being tried for spinning solution.

"Made in U.S.A." appears for the first time on much mechanical equipment being supplied to American rayon manufacturers.

A surprise to many mills adapting rayon to new textile uses is the fact that rayon is not subject to weighting.

MAKE USE OF 4-PLY SERVICE

1 PRODUCT RESEARCH
Helps you get the right yarn or fiber.

2 FABRIC DEVELOPMENT
Helps you design new fabrics.

3 TEXTILE RESEARCH
Helps solve production and finishing problems.

4 "CROWN*" TESTED
Helps provide scientific selling facts.

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Offices: 350 Fifth Avenue, New York 1, N.Y.; Charlotte, N.C.; Philadelphia, Pa.; Providence, R. I.; Washington, D. C.; Wilmington, Del.

Plants at: Marcus Hook, Pa.; Roanoke, Va.; Lewistown, Pa.; Nitro, W. Va.; Parkersburg, W. Va.; Meadville, Pa.; Front Royal, Va.

*Reg. U. S. Pat. Off.

CROWN TESTED RAYON FABRIC

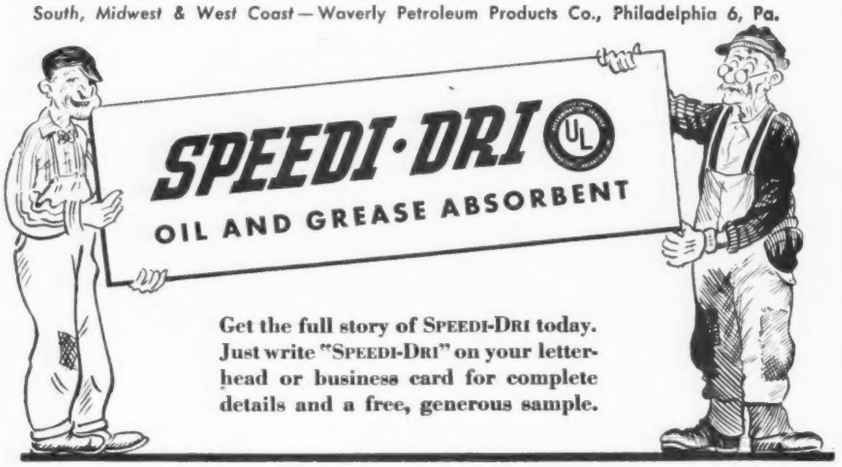
OUT OUR WAY

BALONEY! THERE'S MORE REAL THINKING DONE TODAY THAN THERE EVER WAS!
WHAT HAVE YOU GOT TO THINK ABOUT? YOUR MACHINE'S AUTOMATIC-- ART, MUSIC, MACHINERY, LITERATURE, EVERYTHING YOU MIGHT THINK ABOUT HAS ALL BEEN FIGURED OUT FER YOU-- JUST GIVE ME A NEW IDEE, JUST ONE THAT YOU CAN'T FIND IN A BOOK! WHY, THIS GENERATION IS NOTHING BUT PARROTS!
A NEW IDEE, HE SAYS! HE'S SPREADIN' ONE AROUND NOW-- SPEEDI-DRI! WELL, HE'S PART RIGHT AT THAT-- SPEEDI-DRI IS AUTO-MATIC!
J.R.WILLIAMS
T. M. REG. U. S. PAT. OFF.
COPR. 1946 BY NEA SERVICE, INC.
IDEA MEN

SPEEDI-DRI . . . the granular, oil-thirsty absorbent . . . is the automatic, modern method of floor-maintenance. One man to spread it around over film-slick floors . . . the same man to sweep it up with an ordinary, stiff broom. It's that simple! The results? When SPEEDI-DRI is on the floors, you've got a magic carpet of safety underfoot . . . no slipping, no falling. And when SPEEDI-DRI is swept up, it takes with it dangerous, unsightly oil- and grease-deposits, making your floors home-clean.

Yes, SPEEDI-DRI is modern because it doesn't require trained personnel . . . or expensive machinery . . . for its use. It's modern because it points to economy, to safety, in any shop. SPEEDI-DRI reduces accidents caused by falling and slipping. It keeps machines going, by keeping men at work . . . in safety. It reduces fire-hazards, for SPEEDI-DRI will not readily burn, even when oil-soaked!

SUPPLIERS: East—Safety & Maintenance Co., Inc., New York 1, N. Y.
South, Midwest & West Coast—Waverly Petroleum Products Co., Philadelphia 6, Pa.


SPEEDI-DRI
UL
OIL AND GREASE ABSORBENT
Get the full story of SPEEDI-DRI today. Just write "SPEEDI-DRI" on your letterhead or business card for complete details and a free, generous sample.

have stayed, while the top-notch workers have gone to other jobs. There may be cases where a 20-year record by a worker means only that one of the workers has outstayed his greatest usefulness by about 15 years!

The mill will never get enough of the kind of foremen who retain the best of the men who work with them. When you find such a foreman, he may have fewer long-service records, but he may have more workers who are a real credit to the department. *(R-221)*

Card-Index System Aids Filing Information

Once again I am addressing you on my favorite topic—textile magazines. This time it is a request for you to give serious consideration to:

(1) Completing all articles in Textile World in a minimum number of pages and not carrying them through the back advertising pages in numerous single-column pages.

(2) Starting or finishing no two articles on one page but filling in the back of the page or pages with advertising.

I note that since my last letter some progress has been made toward accomplishing section 1 but section 2 has apparently been completely ignored.

I remove the pages containing articles and keep them in hard-back, loose-leaf volumes. The above suggestions, if adopted, would simplify indexing and allow the separation of sheets into volumes dealing with separate operations or phases of textiles.

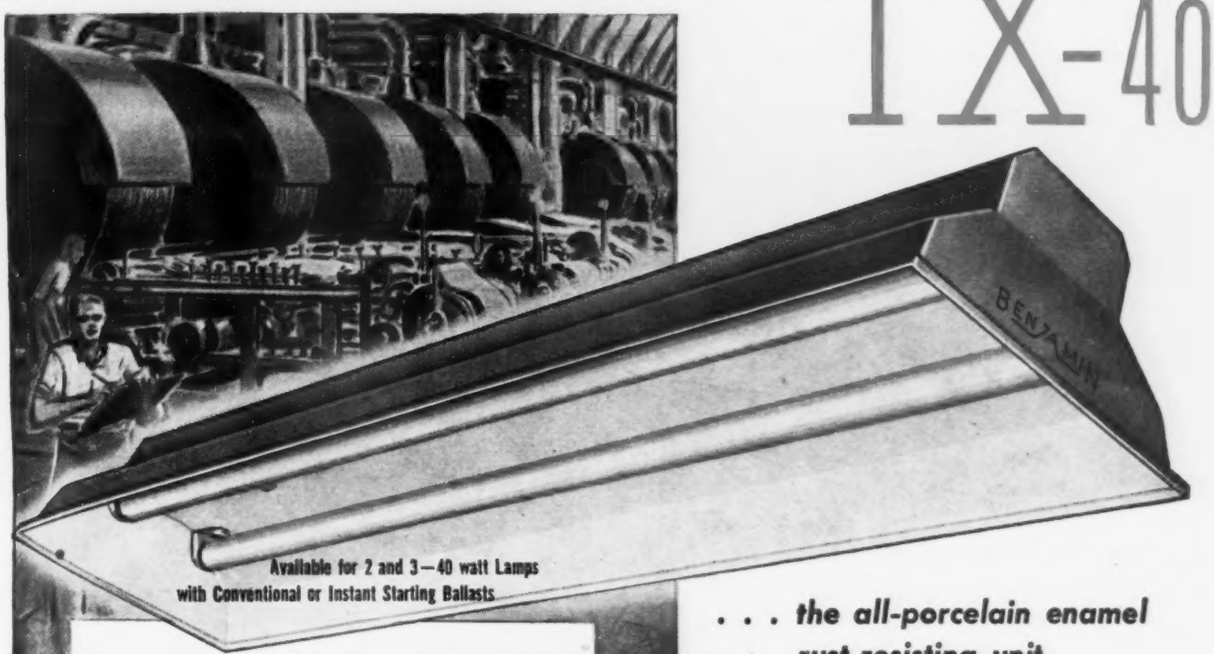
These pages are kept permanently, and the rest of the magazine is consigned to the waste basket. I believe if correctly handled the advertising on these pages would be sought after and would eventually command a higher price. It is my opinion that firms advertising would seek to have their copy placed with or on the back of an article concerned in some way with their own product. I could carry on the possibilities of this at some length but consider it carrying coals to New Castle.

I realize it would possibly lessen the call for technical books, but I do not believe this would amount to a great deal.

The elimination of the glue on the back and a return to stapling the magazine together would be a help but is not essential.

If you do nothing else with this idea, I would appreciate your submitting it in your own words to

Humid, Damp and Dusty Locations call for this new one-piece Fluorescent Lighting Unit .... the new "TX-40"



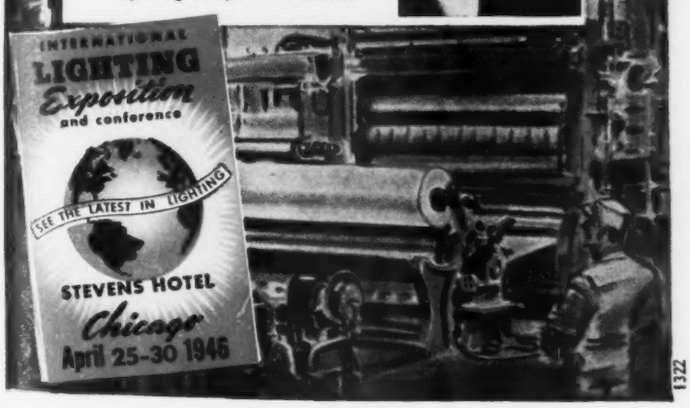
Available for 2 and 3—40 watt Lamps with Conventional or Instant Starting Ballasts

"Type TX-40" Embodies All the Advantages Found in All BENJAMIN FLUORESCENTS

- √ Benjamin Life-Time Porcelain Enamel
- √ Built-Like-A-Battleship Construction
- √ Easier Installation and Maintenance
- √ Certified Conformance to highest illumination, mechanical and electrical standards and specifications.

PLUS—

- √ SPECIAL RUST RESISTING HOUSING. Entire exterior of unit is single coated with gray porcelain enamel over a ground coat for extremely high resistance to rust. Inside section porcelain enameled with two white coats over a ground coat.
- √ ONE PIECE REFLECTOR HOUSING for durability and long life.
- √ REMOVABLE PORCELAIN ENAMEL STEEL PLATE on which control equipment is mounted forms the reflector top; removable by releasing two screws for easy wiring or inspection of ballasts.



1322

. . . the all-porcelain enamel rust-resisting unit.

Rust and other problems due to humidity and dust meet their master in the new Benjamin "Type TX-40." Now, even the most humid locations can be economically provided with fluorescent illumination through lighting units especially designed and constructed for such purposes.

"Type TX-40" Fluorescent Lighting units have wide applications in textile mills, paper mills, food plants, laundries and other process industries. In these locations the one piece all porcelain enamel construction of the "Type TX-40" unit provides durability and long life operation not possible with ordinary units. For complete data on these units and other Benjamin Fluorescent equipment . . . ***write Benjamin Electric Mfg. Co., Dept. EE, Des Plaines, Ill.***

BENJAMIN
TRADE MARK
PORCELAIN ENAMEL
Fluorescent
LIGHTING EQUIPMENT
Distributed Exclusively Through Electrical Wholesalers

LOWELL
SHUTTLES
DOGWOOD OR
PERSIMMON—
FIBRE COVERED
OR PLAIN
BOBBINS
MAPLE, BIRCH
OR BEECH
A HALF CENTURY
OF EXPERIENCE
Experience is the best teacher and this company has had half a century of it in manufacturing shuttles and bobbins for all fibres.
All wood for Lowell Products is well seasoned and kiln dried. Every operation is performed in our own shop to control quality and speed up deliveries. Any desired finish can be furnished.
May we hear from you?
LOWELL SHUTTLE COMPANY
Established in 1896
15 TANNER STREET • • LOWELL, MASS., U. S. A.

your subscribers for their criticism. If placed in a prominent spot and replies requested I am of the opinion you would get a large and favorable reaction. (R-198) Wm. H. Ingram, Chicago, Ill.

Editor's Note: Any plan for laying out the editorial content of a magazine presents mechanical problems, and there is always a considerable difference of opinion as to the best method. Your suggestions have merit and will be carefully considered.

We wonder, however, if you could not overcome the difficulty you are having by filing or binding complete issues and maintaining a card index of the articles to which you might later wish to refer. We use such a system in our own office, cross-indexing by subject and author; and we virtually never have any difficulty in referring to material, as we are obliged to do almost daily. We have been told by some of our readers that they follow this system and that they think it is the best. For many it solves the problem of referring to the smaller items such as appear in our Kinks & Short-Cuts section. We realize that it would be a difficult job to clip and file these short items individually; yet, often, certain ones are of greater practical value to individuals than some of the feature stories.

For our own office we have devised another plan for filing information from the periodicals to which we subscribe; and this might be found more satisfactory by some readers of Textile World—particularly by those who do not have the desire or the facilities to preserve complete issues. In this system we number clippings consecutively as they are filed and maintain a card index of subjects, each keyed to the correct number or numbers. Thus, one subject on a card—say, Comb-Box Lubrication—might refer to Nos. 149, 1,051, 2,384, etc. It might be that one of the clippings—say No. 1,051—carried also a story on tricot needles. In that case, another card headed "Tricot Needles" would refer also to No. 1,051. With such a system, it makes no difference how many subjects are covered by one clipping. That clipping needs to be filed in only one place, and as many references as necessary can be made to it through the card index. Based on our long experience with this system of our own invention, we heartily recommend it to our readers.

This occasion seems to present a good opportunity for us to remind our subcribers that a complete index to Textile World appears annually in the Textile World Yearbook & Cata-

Background for Beauty!

Today—America's best dressed women reflect not only the creative genius of American fashion designers, but the artistry of American fabric manufacturers. Yes, fine fabrics inspire fine fashions . . . and proper processing is the background for their beauty.

That's why so many leading mills, converters, finishers and dyers have turned to Colgate-Palmolive-Peet for high-quality wetting, fulling, scouring and dispersing agents.

There is a C.P.P. soap or synthetic detergent for every type of fabric—for every processing problem. Ask your local Colgate-Palmolive-Peet representative for details. Or, write to Industrial Department, Colgate-Palmolive-Peet Company.

COLGATE WHITE SOAP FLAKES
ARCTIC CRYSTAL FLAKES
BADGER FLAKES
ARCTIC SYNTEX "A" AND "T"
COLGATE FORMULA 10

Colgate-Palmolive-Peet Company

JERSEY CITY 2, N. J. • ATLANTA 3, GEORGIA • CHICAGO 11, ILLINOIS • MILWAUKEE 4, WISCONSIN • KANSAS CITY 3, KANSAS • BERKELEY 2, CALIFORNIA

S-T-R-E-T-C-H-I-N-G A BOXCAR

IN THE EARLY STAGES OF THE WAR, a serious shortage of shipping space threatened supply lines to Europe and the Pacific. Aiding in the urgent search for a solution to the problem, The Cambridge Tile Manufacturing Company, Cincinnati, successfully completed an experiment in compressing three carloads of dried whole egg powder and loading them into a single boxcar.

Presses that had been used to compress clay into Suntile were quickly converted into food-compression equipment through the use of new dies designed and built in Cambridge Tile's own shops. Facilities were rapidly expanded to meet the ever increasing demand of the Armed Service Forces for compressed emergency rations. But the conversion created handling problems that throttled production and prevented full utilization of the extra shipping space made available by the new food compression method.

So Towmotor engineers were called in to install a modern materials handling system. 100-pound bags of dried food powders were loaded on pallets in the receiving room and fed to the production line in a continuous, controlled stream. The finished cakes of compressed food were packed into shipping cartons, assembled into large unit loads, and moved directly into the boxcars by one girl and a Towmotor. Work schedules were accurately timed to provide maximum output per man and machine. Closer inventory control eliminated delays and tie-ups. Production speed was increased to machine capacity, freed from the limitations imposed by slow handling methods. Most important, Towmotor made possible immediate and full utilization of every foot of shipping space.

The results achieved at Cambridge Tile are typical of Towmotor installations throughout industry. The know-how and experience that contributed numerous opportunities to increase productive output also enabled Cambridge Tile to effect savings of $1,000 a month in handling costs alone. The Towmotor Materials Handling Analysis Guide, a product of know-how and experience, will greatly simplify your handling problem; send for a copy today. Towmotor Corporation, 1217 East 152nd Street, Cleveland 10, Ohio.

TAKE IT UP WITH

TOWMOTOR

THE ONE-MAN-GANG

log, a copy of which is placed in every textile mill in the country. A separate copy of the index alone is always available to any subscriber who requests it.

Loom Fixer Finds Hints in Magazine

TEXTILE WORLD is handed to me by a foreman, and I find many helpful hints in it. I am a loom fixer on W-3 Crompton & Knowles convertible looms. *(R-199) Wm. H. Kirby, Shirley, Mass.*

TEXTILE WORLD Policy Approved by Mill Man

Allow me to congratulate you on a good technical publication. It is one of the few journals of its type that devotes itself entirely to the progressive education of its subscribers. *(R-203) Chas. H. Miller, Philadelphia, Pa.*

Werner Consultants Planned Woodlawn Layout

We are pleased to publish the letter below to inform the readers of TEXTILE WORLD of the job done by Werner Textile Consultants, Inc., in planning the machine layout at Woodlawn mill.—Editor

We read the article on the modernization of the American Yarn & Processing Co. in the December issue of TEXTILE WORLD with much interest.

We appreciated the reference to the new design for machine layout in the card room of the company's Woodlawn mill. We have a special interest in this development, since we have been the consultants assigned to the job at Woodlawn. We feel that our firm is largely responsible for the present efficient card room set-up; and, like any proud "parent," we felt sort of jilted for not having been mentioned in the article.

Only recently, Fuller E. Callaway, Jr., emphasized in a speech at a meeting of the Cotton Textile Institute the need for intensive research to the end that high efficiency be made the basis of production. We know that the editorial policy of TEXTILE WORLD is in basic agreement with Mr. Callaway's contention, but we regret that an opportunity has been passed up to name an organization which is engaged in putting this principle into practice. *(R-223) Werner Textile Consultants, Inc., New York, N. Y.*

Calcofast

WOOL BORDEAUX RB CONC. (PATENTED)

- **A NEW METALLIZED WOOL DYE**
- **BRIGHTNESS OF SHADE**
- **ALL-PURPOSE FASTNESS**

Calcofast Wool Bordeaux RB Conc. is the most recent development in the Calco group of metallized dyes. As a bordeaux it offers exceptional brightness of shade, which makes it useful as a base color for currently popular reds. maroons and burgundies. Its qualities of good penetration and excellent fastness to light, washing and sea water spotting make it a valuable contribution to the carpet, upholstery and airplane textile trades.

The new Calcofast Wool Bordeaux RB Conc. augments an already substantial list of Calcofast dyes, all of which dye level, uniform shades on carbonized wool. They are highly desirable in fashionable shades for suitings, neckwear, bathing suits, or other purposes requiring good fastness.

FASTNESS FEATURES			
	LIGHT	SEA WATER SPOTTING	PERSPIRATION
	WASHING	LIGHT FULLING	DRY CLEANING

CALCOFAST WOOL DYES

CALCOFAST WOOL YELLOW N
CALCOFAST WOOL YELLOW R
CALCOFAST WOOL ORANGE RN
CALCOFAST WOOL PINK N
CALCOFAST WOOL BORDEAUX BN
CALCOFAST WOOL BORDEAUX RB CONC.
CALCOFAST WOOL RED G
CALCOFAST WOOL BROWN GM
CALCOFAST WOOL GREEN BS
CALCOFAST WOOL GREEN DKB
CALCOFAST WOOL BLUE BN
CALCOFAST WOOL BLUE 2G
CALCOFAST WOOL BLUE 2R CONC.
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Questions and Answers

Loom Checks Determine Optimum Relative Humidity

Technical Editor:

Can you give us information as to the amount of humidity necessary for better strength in our cotton-yarn weaving operations? (9088)

Before this question can be answered with greatest accuracy, it will be necessary to know the following factors about the cotton yarn being woven: percent of size and type of size, percent of softener, percent of moisture retained in warp, speed of loom, and cloth construction.

A mill could best answer this question by running loom stops with different percentages of humidity and analyzing results.

We have found that on weaves of approximately 107 x 56, 183 picks per minute, a humidity of 83% has been very satisfactory; however, it is necessary to carry 8% moisture in the warps. We also try to keep our stretch on slashers down to 1½%.

Methods of determining stretch is by the use of yardage counters, one on the front of the slasher and one on the back.

We recommend cutting samples of warp from the slasher and having a laboratory determine the amount of moisture.

Evidently the inquirer is having difficulty in weaving, probably from yarn breakage which he feels is attributable to insufficient strength of yarn. It may be that the yarn he is weaving has been drafted too much or too little for the particular staple being used. It might be wise for a spinner to experiment with different drafts to secure an optimum break factor. Weaving mills generally prefer a rather high relative humidity. One chart recommends 70 to 80%, and certain mills have been very successful in this range, particularly in the 75 to 80% area, since strength of cotton increases with its moisture content.

Perhaps the inquirer will be inter-

R-C dual-ability

means better blower performance

R-C Centrifugal Blowers may be driven by steam turbine or direct connected motor—whichever is best fitted to the installation.

CENTRIFUGAL

R-C Centrifugal Blowers are available in a multitude of sizes of single or multi-stage design, in capacities up to whatever your needs may be.

ROTARY POSITIVE

Where the rotary positive displacement type is better adapted to your needs, no other company can meet the standards set up by R-C equipment . . . the leader in the field for almost a century.

You'll get profitable service from Roots-Connersville Centrifugal Blowers and Exhausters because:

1. Our engineers study your needs in detail before selecting type, speed, drive, number of stages, style of impellers, etc., to insure the unit best adapted to your special requirements.

2. Our plant builds the units with scrupulous care, to close tolerances, with fine machining and finish of the materials best fitted for the work. They check every part, and the final assembly is subjected to rigid tests, before shipment.

Proof of the practical value of this R-C *dual-ability* is found in the many installations of our Centrifugal Blowers and Exhausters. They're being successfully and profitably used in almost every industry. They live up to their guarantees and have unfailingly given excellent performance.

For better blower performance, you can depend on us.

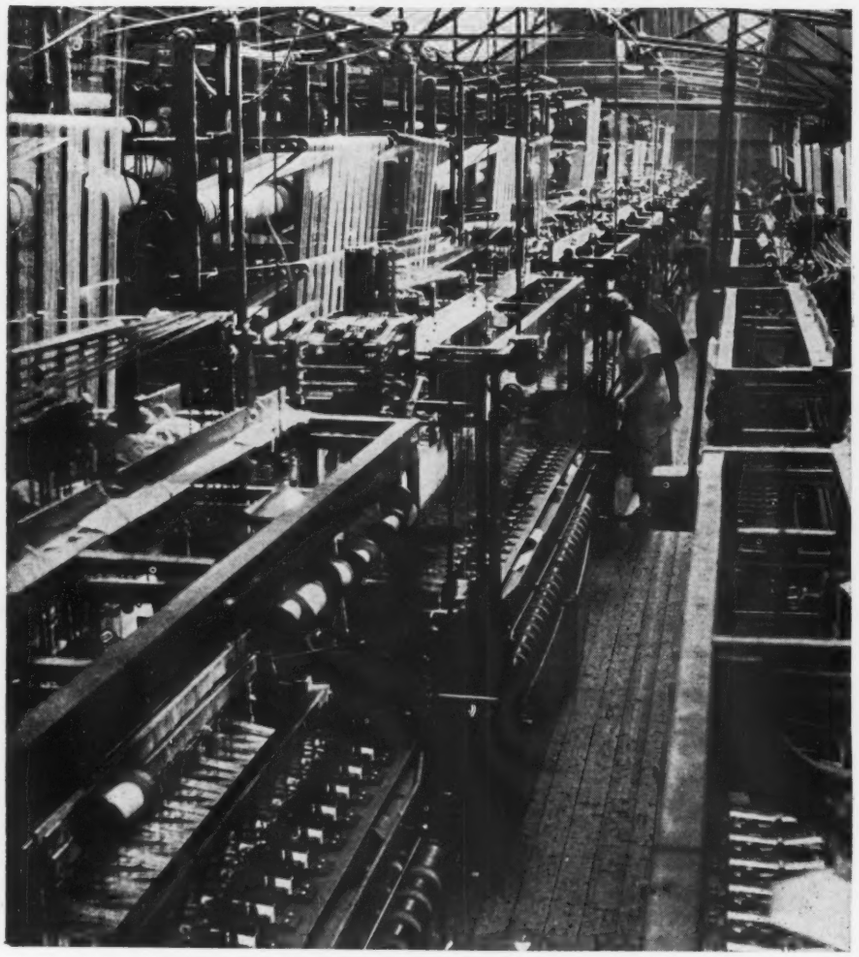
ROOTS-CONNERSVILLE BLOWER CORP.
One of the Dresser Industries
602 Reed Avenue, Connersville, Indiana

Roots CONNERSVILLE SINCE 1854

CENTRIFUGAL BLOWERS & EXHAUSTERS

ROTARY POSITIVE AND CENTRIFUGAL BLOWERS • EXHAUSTERS • BOOSTERS
LIQUID AND VACUUM PUMPS • METERS • INERT GAS GENERATORS

CLUTSOM HIGH SPEED SHUTTLELESS LOOMS



A Battery of Clutsom High Speed Shuttleless Looms

"A WORD TO MANUFACTURERS OF NARROW WEBBING"

This is a sellers market but tough competition will sooner or later come again.

In good times you want all the production you can get, in bad times you must have production at its lowest cost.

More webbing per operator than any other type of narrow fabric looms is the answer in either case. CLUTSOM HIGH SPEED SHUTTLELESS LOOMS are proved low cost producers in varied installations all over the world. Think now of post war prospects and take into account the merits of CLUTSOM HIGH SPEED SHUTTLELESS LOOMS.

We will gladly demonstrate the machine for you. Early delivery assured.

CLUTSOM MACHINES INC.

205 EAST 42 STREET **NEW YORK**

Telephone MUrray Hill 4-2327 **FACTORY: Springdale, Connecticut**

ested in the following humidities which are being maintained throughout a very successful cotton mill.

Relative Humidities in Cotton Processing

	% r.h.
Picking	50
Carding	50
Combing	60
Drawing	60
Roving	55
Spinning	55
Spooling and Winding	70
Warping	70
Weaving	78

Yarn "Shortages" May Be Caused by Moisture

Technical Editor:

A problem we frequently encounter is that of checking short on yarn when making up cloth from purchased yarn. Can you tell us some of the factors causing this and what steps we can take? We suspect that our shortages may be coming from improper moisture content in the yarn. (9023)

The trouble could be in the regain in the cotton yarn as the inquirer suspects. If he is getting yarn with 8% regain, it will naturally dry out under normal conditions, especially in a steam heated building.

ASTM Standard regain is 7%, but there is a plan to change to 7½% because when yarn is conditioned at 70° F. and 65% r.h., the actual regain will be 7½%. The writer highly recommends that the inquirer purchase a conditioning oven with balances or one of the electronic testers for checking the moisture in incoming yarn, and then correct the invoice weight. One is always in trouble until reliable tests are made on the spot when cotton is received.

The following formulas will help in determining if the yarn has too much moisture when packed.

First sign of excess moisture is the loss of weight in transit. The case will weigh less than that shown on the case and invoice. Here again another prerequisite comes up, that of having accurate scales on which to weigh the yarn as received.

Most yarn will lose weight in transit, depending on the climatic conditions of the country through which it is shipped. An example might be as follows:

Data–

Invoice weight of case	562 lb.
Actual regain test	6.40%
Receiving weight (dry)	550 lb.

Formulas–

Theoretical dry weight of case (as re-

AS SEEN IN LIFE

Two exciting costumes by two famous designers . . . Troy Stix and Joset Walker . . . featuring the first of our new ARALAC fabrics. A bright forecast of things to come!

IT'S ARALAC!
Forecast of things to come! A superb Duplan mossy crepe . . . a fabric that is
50% Aralac blended with 50% Rayon . . . perfect for this Troy Stix frock
with the new rounded silhouette.

IT'S ARALAC!
Grandma's old shawl was the inspiration for Joset Walker's newest silhouette:
bulky above and below the waist . . . slim in effect! Made of Sablon, a Foreman
fabric of rayon and ARALAC.

ARALAC, INC.

71 Vanderbilt Avenue, New York 17, New York

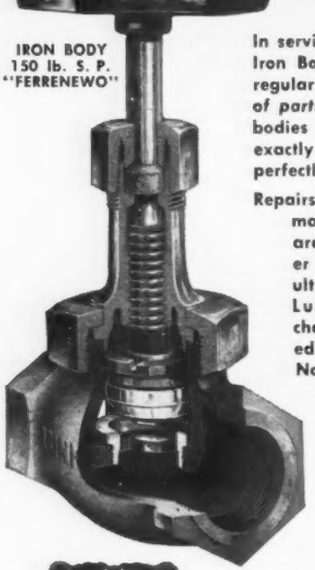
ARALAC, produced by a division of NATIONAL DAIRY PRODUCTS CORPORATION, represents but one of the many contributions this nation-wide organization is making toward the more efficient utilization of America's agricultural resources.

★T. M. Reg. U. S. Pat. Off.

REPAIRS SPEEDED DOWNTIME REDUCED COSTS CUT...

by LUNKENHEIMER Interchangeable Parts

IRON BODY
150 lb. S. P.
"FERRENEWO"

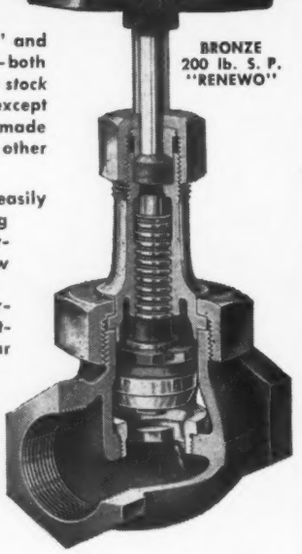


In servicing the Bronze "Renewo" and Iron Body "Ferrenewo" Valves—both regular and plug types—only one stock of *parts* is required. *All* parts (except bodies and bonnet rings) are made exactly the same and fit each other perfectly.

Repairs are more quickly and easily made, ordering and handling are simplified. The result: Lower maintenance cost and low ultimate valve cost. Lunkenheimer part-interchangeability is fully illustrated and described in Circular No. 567.

Ask your Lunkenheimer Distributor for a copy, or write direct.

BRONZE
200 lb. S. P.
"RENEWO"



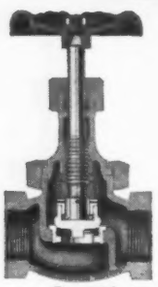


Fig. 16
300 lb. S. P.
Bronze "RENEWO"

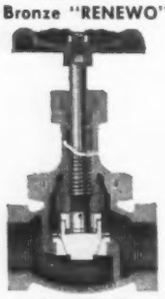


Fig. 16-P
300 lb. S. P.
Bronze Plug Type
"RENEWO"

VALVE MAINTENANCE SIMPLIFIED!

All parts of these valves (except bodies and bonnet rings) are exactly the same. They fit each other perfectly.

For example—if you need a stem, disc, or seat ring for the "RENEWO", you can use the corresponding part of the "FERRENEWO", and vice versa.

Thus there are fewer parts to be carried, repairs are more quickly and easily made. The labor, time, and expense of valve maintenance is cut down—'way down!

SAVE THIS WAY, TOO!

For severe throttling service, a regular type can be converted into a plug type, by simply changing the seat and disc, without taking the valve out of the line.

Thus it's not necessary to buy a whole new valve—just a matched set of plug type seat and disc which interchange perfectly in corresponding patterns and sizes in a range of pressures from 150 to 350 lb. S. P.

Lunkenheimer simplicity of design, minimum number of parts, and fine precision workmanship make this and other outstanding economies possible.

SEE YOUR LUNKENHEIMER DISTRIBUTOR!

Lunkenheimer Distributors are located in all industrial centers. There is one near you—have him demonstrate with actual samples the interchangeability of parts in "RENEWO" and "FERRENEWO" Valves. It's a big time and money saver for any plant!

THE LUNKENHEIMER CO., Cincinnati 14, Ohio
(OFFICES: NEW YORK 13, CHICAGO 6, BOSTON 10, PHILADELPHIA 7.
EXPORT DEPARTMENT: 318-322 HUDSON ST., NEW YORK 13, N. Y.)

QUESTIONS AND ANSWERS

ceived) =

$$\frac{\text{Rec. Wt. of case}}{\text{100 plus regain}}$$

Percentage regain corrected to invoice weight =

$$\frac{\text{Inv. Wt. of case} \times 100}{\text{Dry Wt. of Roll}}$$

Solution–

Receiving weight (dry) =

$$\frac{550}{106.4} = 516.9 \text{ lb.}$$

$\frac{562 \times 100}{516.9}$ minus 100 = 10.87% regain when packed.

$$\frac{562 \times 110.87}{107} = 582 \text{ lb.}$$

582 − 562 (Inv. Wt.) = 20 lb. excess moisture when packed.

Tests should be made on 10% of cases in shipment, and an average regain should be made for the entire shipment.

The foregoing is an exaggerated case, but the principle is what we are concerned with. The illustration shows how important it is to know what is being received, and why a buyer may run short of yarn on his contract.

Another situation in which weight can be lost is in computing tare. Each time yarn is received from a new source of supply, the tare should be checked on several cases to determine if that shown on the case is correct.

A third and most frequent cause of "losses" is from yarn being on the heavy side of the yarn number. When the yarn is spun on the heavy side, the user gets less yards of yarn which makes fewer yards of fabric than if the yarn was of correct weight.

It is standard practice with some manufacturers to run their yarns on the heavy side of the number in order to get more pounds. It is not necessarily dishonesty on the part of the manufacturer; he may be taking advantage of the tolerances of 3% over or under the number allowed.

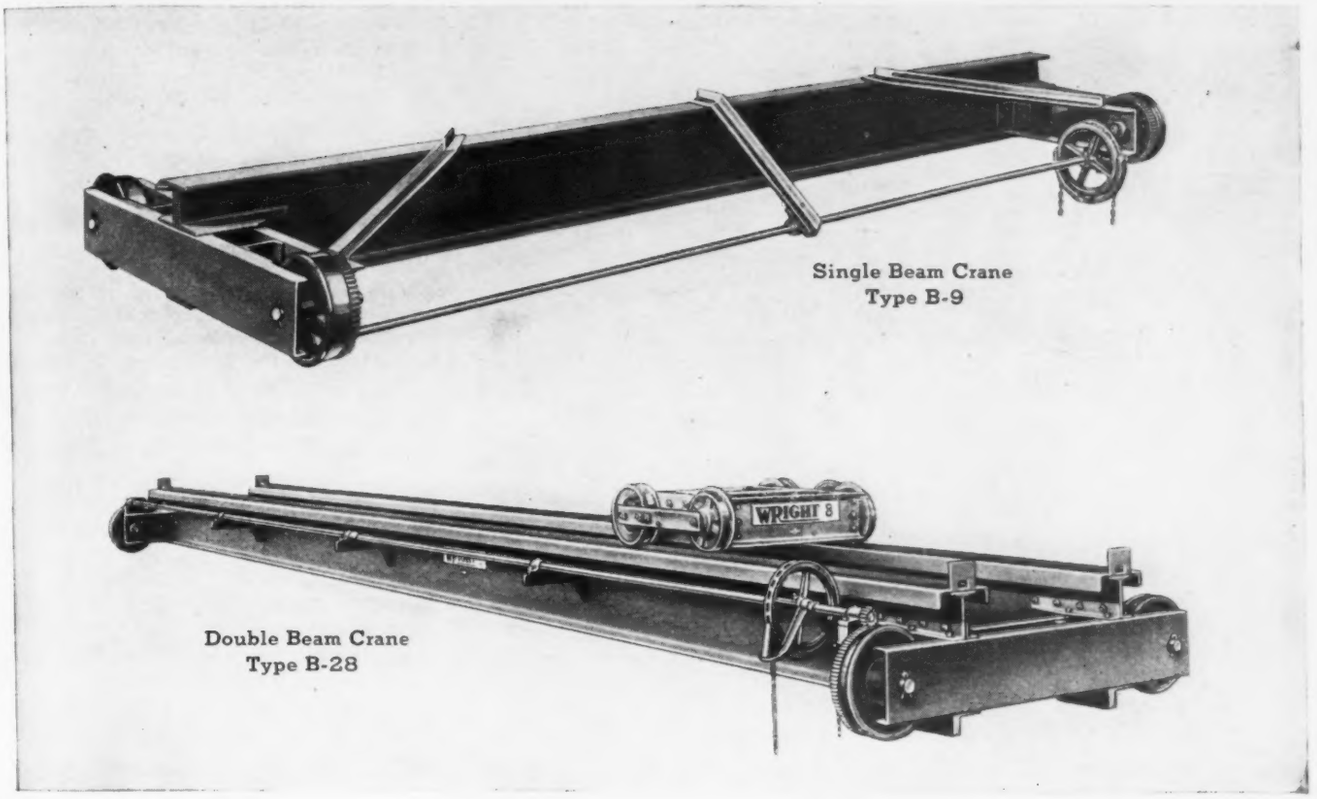
Here again test should be made, this time on the yarn number, as outlined by ASTM.

It is not difficult to see how yarn on the heavy side of the number will affect the yards per pound. Using 30s as an example with a tolerance of plus or minus 3%, we have:

30.00 × .03 = .90, or 29.10 to 30.90 yarn number.
30.90 × 840 = 25,956 yd. per lb.
29.10 × 840 = 24,444 yd. per lb.
The difference is 1,512 yd. per lb.

Manufacturers must have this tolerance; but if yarn continually runs heavy and requirements are such that the user must have yarn that averages nearer the standard number, then he

WRIGHT CRANES



Single Beam Crane
Type B-9

Double Beam Crane
Type B-28

Competition is going to be plenty tough all this year and next. Never before in all history have manufacturers stood in such need for labor-saving — labor-aiding equipment, and production efficiency. Not only do you need a Wright traveling crane which will really put your ceiling to work, but you need Wright's material-handling experience to help you cut costs and assist you in speeding up production.

Wright material-handling equipment (cranes, hoists, and trolleys) is built in a wide range of capacities and to meet the most exacting specifications. The Wright combination of crane and hoist is engineered not only to help bring your production costs down to competitive levels but for reduced maintenance expense. Call your local Wright distributor (see metropolitan classified telephone directory). If your problem is special he will bring along a Wright engineer. In the meantime, write for Wright Specification Bulletin, or Catalog 12-D.

ARMY E NAVY
FLYING OVER THE WRIGHT HOIST PLANT

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WRIGHT MANUFACTURING DIVISION
AMERICAN CHAIN & CABLE

TRADE MARK

In Business for Your Safety

Many of the yarns for the yarn-dyed fabrics and knit wear, shown in the great department stores and quality shops of America, are yarn dyed by Globe.

This is because Globe's yarn dyeing service is used by leading textile mills whose products are nationally known and approved by designers of smart apparel.

If package dyeing does not fit into the needs of your production, Globe is equipped to give you the kind of yarn dyeing you require.

Yarns dyed by Globe include cottons, worsteds, rayons, nylon, aralac, and blends of all kinds.

Globe DYE WORKS CO.

1865 1946

FRANKFORD, PHILADELPHIA 24, PA.

should go back to the manufacturers and get yarn to meet specifications exactly.

If our inquirer calculated his needs on normal waste and standard weight, on 100,000 lb. of yarn delivered 1% on the heavy side there would be a 1000-lb. "loss" so far as resulting cloth is concerned.

Twist and Tension Affect Combination Yarn Results

Technical Editor:

Can you suggest a source of information covering the doubling of combination yarns, treating the factors of twist, tension, take-up and allowances for the difference in diameters and characteristics of the doubled yarns.

This question is one that has troubled weavers, knitters, and throwsters for years; but there has been no specific data published since there are so many variables. In addition to twist tension, take-up, and diameters mentioned there are other variables such as number of filaments, diameter of filaments, soaking formula, type of yarn, and particular characteristics desired in the cloth.

For articles on this subject you might refer to the following issues of TEXTILE WORLD; May, 1941, page 92, and April, 1943, page 94.

Usually difficulties encountered with combination yarns revolve around defects in the cloth or poor running, particularly during weaving, although there may be an infinite number of problems.

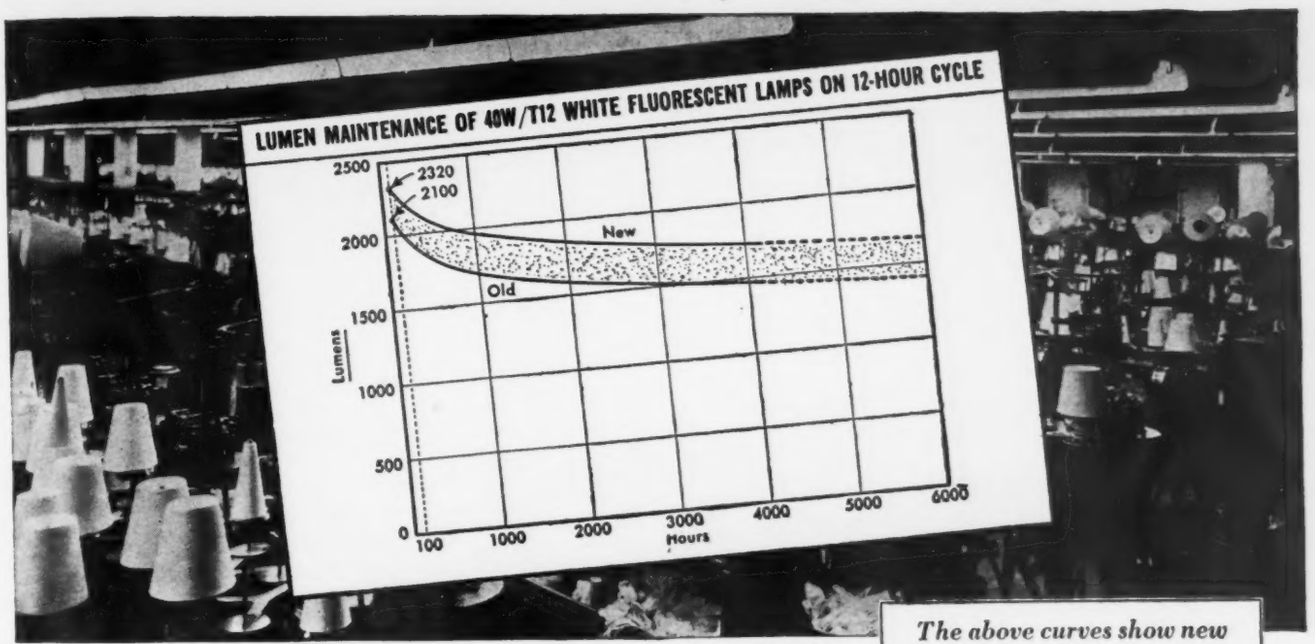
Usually defects in the cloth come from variations in twist, variations in tension, yarn mixture or obvious mechanical difficulties such as kinks, strip-backs, or broken filaments. The mechanical defects are usually easy to trace, but the first three named are not. To control variations in twists involves frequent twist checks and stroboscopic inspections. Variations in tension are usually caused by poor control of tension on the relatively untwisted component of the combination yarn. To control this component requires a very good tension device such as a multiple-disc or a self-compensating tension unless the yarn is being run on a machine equipped with a double set of feed rolls for feeding each yarn into the combination at exactly the optimum rate as desired for the particular effect in the fabric or best running conditions.

The best running yarn is usually one that is so combined that both components break simultaneously when subjected to strain. Naturally, such a yarn would be produced quite differently if the combination is twist on twist than if the combination is twist against twist of the relatively higher-twisted component.

SYLVANIA NEWS
TEXTILE EDITION

FEB. *Published by* SYLVANIA ELECTRIC PRODUCTS INC., Salem, Mass. 1946

MORE LIGHT OBTAINED FROM 20-W AND 40-W FLUORESCENT LAMPS; BOON TO TEXTILE PLANTS



The above curves show new and old lumen ratings (at 100 hours) and the lumen maintenance throughout life, when lamp is operated on a 12-hour cycle.

NEW FLUORESCENT RATINGS

	100 Hr. LPW		Cycle	Maintenance at 70%	
	Old	New	Hrs.	Old	New
20WT12 White	43	46	3	36	39
			6	32.5	35.5
			12	30	33
20WT12 Daylight	38	—	3	32	33
			6	29	31.5
			12	26.5	30
40WT12 White	52	58	3	43.5	50
			6	39.5	46
			12	36.5	43
40WT12 Daylight	45	—	3	38	40
			6	34	37
			12	31.5	34

Through extensive research and further improvement in manufacturing methods, Sylvania Electric has made available *more light* from their popular 20-watt and 40-watt fluorescent lamps.

This announcement is especially important to textile mills — where the very nature of the work involved calls for the best light money can buy, for workers' comfort and consequent better and greater production.

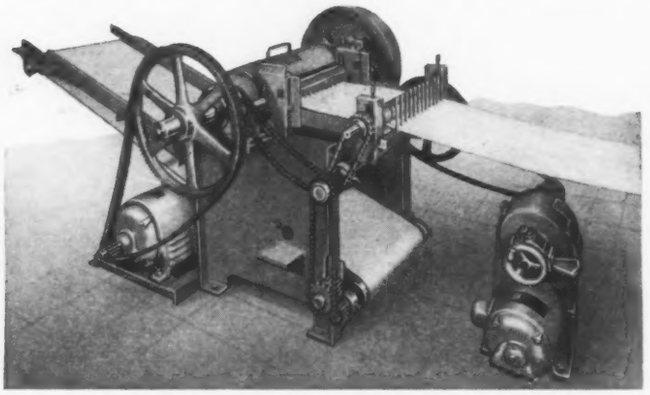
These increases have been accomplished by Sylvania without change in any physical or technical characteristic of the lamps. And they entail no additional cost to purchasers!

Prior to May 21, 1945, the 40-watt White fluorescent lamp was rated at 52 lumens per watt. New rating represents an increase of 10.5% over the lumen rating which was effective until May 21st. While the lumen *maintenance* rating of the 20-watt Daylight lamp, on a 12-hour operating cycle at 70% life, has been increased 15.4%.

SYLVANIA ELECTRIC

MAKERS OF FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES; ELECTRIC LIGHT BULBS; RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES

FOR MAKING RAYON STAPLE



The Taylor-Stiles Fiber Cutter illustrated (shown with guards removed) cuts continuous fibers to any desired length from 1 to 6 inches, by simply dial setting the vari-drive motor controls. Yarns are cut dry on this machine but there are models for wet cutting also.

A modern, high production staple cutter.

Write for full description

TAYLOR-STILES & COMPANY

15 Bridge Street, Riegelsville, N. J.

EMPIRE
REG. U. S. PAT. OFF.
...the special
TEXTILE MILL
CRAYON
EMPIRE MILL CRAYON
JUNIOR MILL CRAYON
Made by crayon experts—and for many years meeting, the exacting requirements of wool, cotton, silk and rayon textile mills.
18 clear, easily distinguished colors. Both large and small stick crayons.
Write to Dept. T-2 for a FREE chart showing these colors!
THE AMERICAN CRAYON COMPANY
1706 HAYES AVENUE, SANDUSKY, OHIO
NEW YORK
SAN FRANCISCO
DALLAS

Packing and Shipping Hose

(*Continued from page 145*)

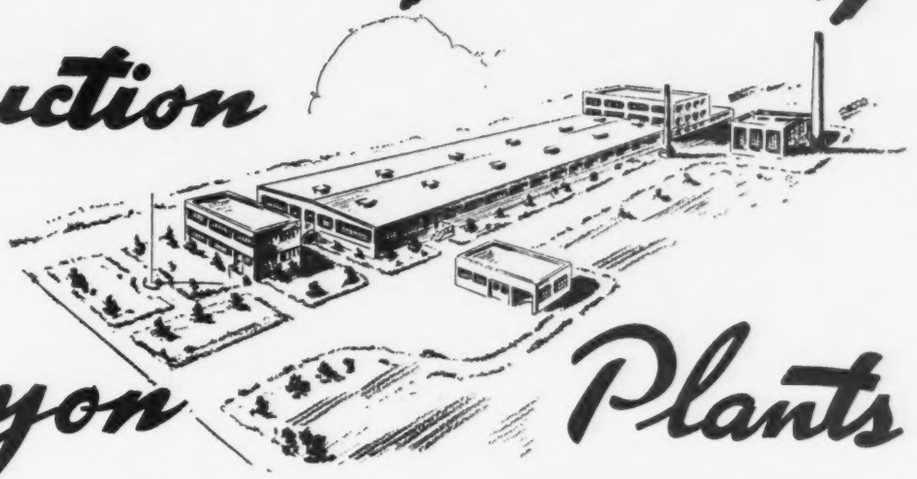
for a package, and stacks them on the stand at her side. When the lot to be paired is completed, the reboards, redyes, off-shades, odds, and menders are counted and recorded on the work ticket and disposed of at a place that has been designated for the various rejects. Such is the life of the present-day pairer, a job requiring too much versatility for the average individual.

The goods are often stored in racks after they are paired, and are later taken-up by the girls who fasten the hose together ("tackers") and attach the rider tickets; then they go to labelers, folders, and boxers as shipments are ordered. Rush orders go directly to tackers and boxers who tuck the hosiery away snugly in cartons, cellophane envelopes, or bundles as the case may be. It is best, however, for the goods to go straight through to the final package in one continuous series of operations. When hosiery is paired and stored any length of time, it may become soiled from dust and small particles floating in the air.

In some shipping rooms, the operatives take individual lots of hosiery from the boarders and do all the work on the lot from inspecting to the final package. That is, a girl will get a lot, inspect and pair it, tack the pairs together, transfer the label on the foot, fold, and bundle. Proponents of this system claim that changing from one operation to another (pairing, tacking, folding, etc.) rests the operative. The change from one processing task to another breaks the monotony and keeps the girls from tiring. This theory, however, is not borne out in practice. It is further contended that division of labor in the finishing room causes too much congestion of goods in process between groups of operatives. One operative, carrying on all the way to the shipping container, eliminates this intermediate storage space. Although this may be true, nevertheless under the division-of-labor system, if the pairing tables are properly arranged with conveyor belts, there is no necessity of congestion of goods in process.

ROOM FOR IMPROVEMENT. Increasing the efficiency of methods of preparing hosiery for shipment, particularly pairing and folding, has not been given the thought it deserves. There is much room for improvement. To perform both pairing and folding requires too much versatility for the average person. The pairer is required to inspect, grade, and pair in one and the same operation. The folder often is required to count, bind, and box as well as fold. The writer

Complete Engineering AND Construction OF Rayon Plants



"Time is of the essence of the contract"

CAPITAL invested in the establishment and operation of a rayon plant is higher per pound of rayon produced than in most other industries.

Demand for more and more rayon and staple fiber is here. New Plants and plant expansion is our business and now we are able, *during the period of eighteen months*, to help you with the selection of plant location, to design, build, install equipment and to put your plant in operation with a guarantee of quantity and quality of output.

Pioneers of the rayon and staple fiber industry, Oscar Kohorn & Co. have, for more than 30 years, designed and put into operation more plants than any other organization in the world. So our experience can guide you and and speed you toward the most up-to-date plant, efficient production methods and superior quality for the post-war product.

Investors are invited to consult with this organization, which is now prepared to meet your requirements, from inception to operation in eighteen months.

INQUIRIES WELCOMED

SERVICES RENDERED:

PLANT LOCATION:

(a) Survey on the ground to determine location, man-power, transportation, markets, raw material, power, fuel and water supplies.
(b) Determine size of initial plant, and plan its expansion.
(c) Consultation on types of yarn, denier, packaging, etc.
(d) Estimates for land and building, equipment, and working capital.
(e) Estimate production cost and overhead, sales and profit.

ERECTION OF BUILDINGS AND MACHINERY:

(a) Furnish complete plans for buildings and machinery.
(b) Supply all production machinery and auxiliary equipment.
(c) Send KOHORN engineers to erect plant, install machinery and building equipment.

STARTING PRODUCTION:

(a) KOHORN Chemists and Engineers, start the plant and bring it into full production.
(b) KOHORN experts help train local labor.
(c) Modern chemical and mechanical processes, installed by KOHORN, hold consumption of raw material and labor to a minimum.
(d) KOHORN engineers co-operate with your sales department in introducing product to the market.

PLANT EXPANSION:

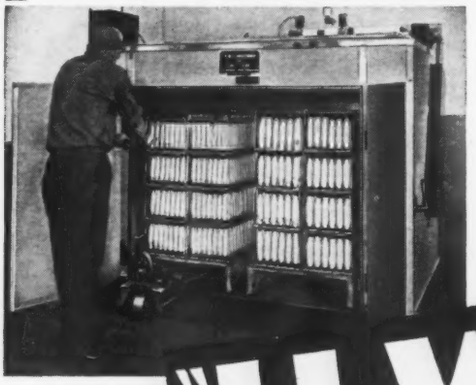
(a) KOHORN'S interest in your plant, after it is turned over to you, continues. Consultation always available.
(b) Our latest patents are put at your disposal when plant expansion is contemplated.

OSCAR KOHORN & CO., LTD.

501 FIFTH AVENUE

NEW YORK, N. Y.

All TEXTILE FIBRES UNIFORMLY CONDITIONED



"H-W" CONDITIONER

FOR REGAIN AND TWIST-SETTING

WOOLEN — WORSTED — SILK — RAYON — NYLON — COTTON

THE INDUSTRIAL DRYER CORPORATION
STAMFORD, CONN.

Both Up and Down!

Yes - - you can

Raise Efficiency

Pull Down Costs

and eliminate unnecessary employee fatigue with these light-weight, portable, economical

Coffing Hoists

DESIGNED FOR

EFFICIENCY - SAFETY - DURABILITY

Coffing Hoists are sold by leading distributors and supply houses in all principal cities.

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Coffing Hoist Co.

MANUFACTURER OF QUALITY PRODUCTS

DANVILLE, ILLINOIS

believes it best to have the hosiery pass through two sets of hands at the pairing table; and two or three sets of hands during the folding operation. Division of labor in the finishing room is based on the old adage: "One thing at a time, and that done well, is a very good rule as many can tell." The more things an operative has to look out for, the more there is likely to be overlooked. Therefore, division of labor in the finishing room should make better inspecting, faster and more accurate pairing, and faster and better work all the way to the package ready for the shipping container.

The modern shipping set-up in the finishing department should provide one conveyor belt and one rider-ticket machine for every two pairing tables. At each table there should be three operatives working in unison. The first operative would be responsible only for inspecting, grading, and rejecting. The other two operatives would confine their attention to pairing and counting. A supervisor would be responsible for recording on the work ticket and disposing of the rejects. An operative with nimble fingers, and special training to wield the needle, should be able to take care of any mends that may be found by the graders.

Within easy access of the pairers, as well as handy to the conveyor belt, should be placed a stapling or tacking machine. One operative would be confortably seated at this machine to feed in the tops of pairs with clock-like precision. As the pairs are bonded they would be arranged on the conveyor belt to be carried to the transferring machine where the brand and label would be automatically lithographed on the hosiery. To make this possible, the conveyor belt would necessarily move intermittently rather than continuously. The intervals, of course, would depend on the length of the hosiery and the dexterity of the various operatives along the line.

After the transferring of labels to the hosiery, the pair passes on to the folder who folds and counts a bundle of pairs. Another operative would bond the package with a band provided for that purpose. An operative at the end of the conveyor would place the bundle in the carton or envelope and seal it for packing.

Packers, under the supervision of the shipping clerk, would take the sealed packages from the conveyor belts and pack them into the shipping containers. When these containers were securely closed, and shipping instructions attached, they would be stored conveniently until transportation facilities were available.

A supervisor would supply the stapling machine with the auxiliaries, and

*"The amount of iron removed is almost incredible!"**

* **Comment of one bedding plant owner shortly after installation of a Dings "High Intensity" Textile Magnet. Name on request.**

LEFT—A typical textile mill installation of the Dings Rectangular Textile Magnet. Cotton passes over the face of the horizontally placed magnet.

with a Dings textile magnet

• There's a great feeling of increased safety from fires and equipment damage due to tramp iron when a Dings Textile Magnet goes to work. And to most mill men the amount of iron removed *is* almost incredible because the powerful magnetic field produced by Dings "High Intensity" Magnets—more than 20 times as powerful as non-electric magnets—does a more thorough removal job than can be expected with any less powerful magnets.

Check the installation setups shown here for best safeguarding your plant investment. If you have a special problem, Dings Engineers will gladly make recommendations at no obligation to you. Remember:

Size for size, there are no more powerful magnets than Dings built.

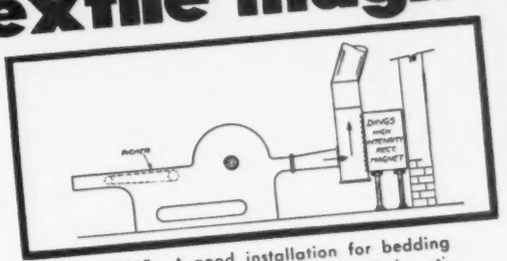
Dings Magnetic Separator Company

540 E. Smith Street • Milwaukee 7, Wisconsin

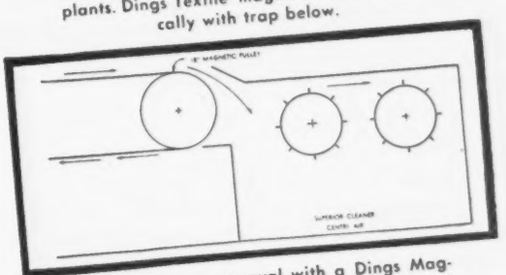
"Separation Headquarters Since 1899"

Dings

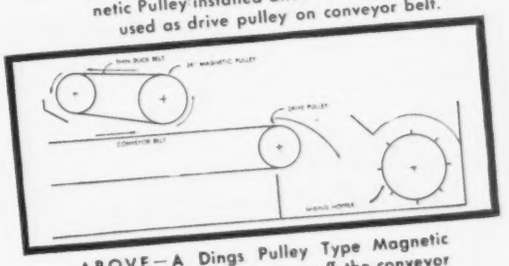
"HIGH INTENSITY"



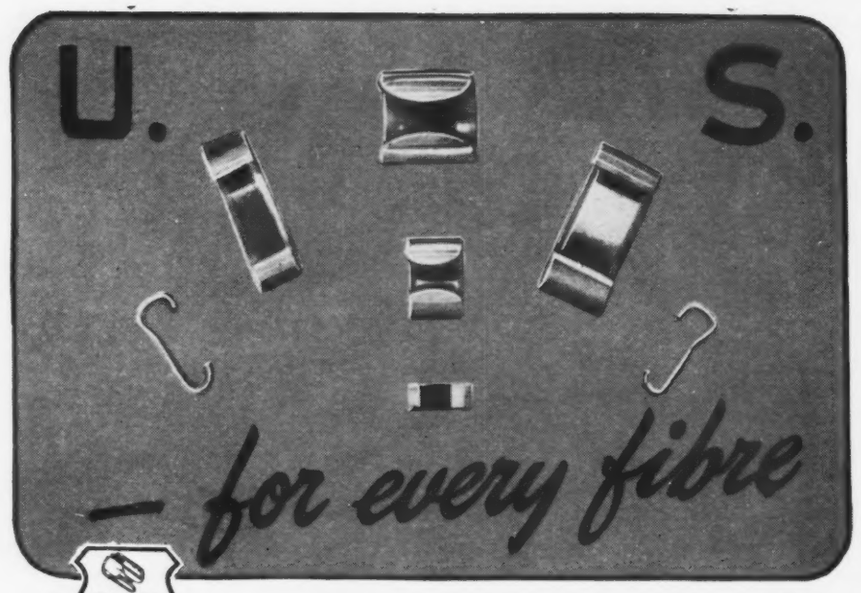
ABOVE—A good installation for bedding plants. Dings Textile magnet installed vertically with trap below.



ABOVE—Iron removal with a Dings Magnetic Pulley installed ahead of a cleaner and used as drive pulley on conveyor belt.



ABOVE—A Dings Pulley Type Magnetic Separator picks tramp iron off the conveyor belt ahead of the mixing hopper.



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158 SUMMER STREET
BOSTON 10, MASS.

enter the records on the work ticket. This supervisor would also look after the automatic transferring machine and keep it supplied with lithographic rolls. The foreman of the finishing room would look after the various machines, keeping them oiled and making minor repairs. If the finishing room was large and contained many such machines, a specially trained fixer would be required to take care of them.

Rayon Tire Cord

(*Continued from page 119*)

The foregoing important factors go to make a tire having a high degree of safety, smooth riding qualities, and long life. If too much twist is used in the cord, the ultimate strength of the tire carcass is impaired; also, if too much elongation is left in the cord, the tire will overly expand, causing the tread to crack. If, on the other hand, too little elongation is left in the cord, fatigue will be poor and the tire will be more susceptible to bruise failures.

Three types of fabric—known as body fabric, top ply, and breaker fabric—are made from rayon cords with the strength in the warp direction. A few picks per inch (generally 2 to 4) of cotton filling yarn (usually 30/1) is used for ease of handling and to assist in keeping the warp ends parallel during the dipping and calendering operations. The body ply is the most densely constructed of the three fabrics and is really the backbone of the strength given the tire by the cords. This fabric generally contains anywhere from 30 to 35 warp ends of 1100/2 rayon cord per inch. The top ply and the breaker are usually more loosely constructed and are adjacent to the tread portion of the tire. A top-ply fabric may contain 18 to 26 warp ends of 1100/2 cords per inch, and the breaker 12 to 18 ends. One manufacturing process does not utilize fabric, but uses only cords.

SUMMARY QUOTED. TEXTILE WORLD in September, 1944, summarized facts presented to the Truman Committee and stated, "Various Senators have been perturbed by the probability that at the end of the war there will be a considerable rayon tire-cord capacity representing very little financial investment and that this fact may bring the prices of rayon cord tires to cotton levels, whereas before the war cotton tires were 25 to 50% less expensive than rayon. These two factors might appreciably affect passenger car tires and hence must be considered as an important part of the conclusions." The many facts brought out in this summary might well be reread.

Since the end of the war, one pro-

6 to 12 Cut Loads in 1/3 less time
PNEUMATIC OR HYDRAULIC CONTROL FOR TOP ROLL TENSION
HUNTER
Stainless Steel Fulling Mill
HUNTER
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Stainless Steel Fulling Mill

THIS BROCHURE WILL TELL YOU HOW

HUNTER #26 FULLING MILLS

AFFORD HIGH SPEED PRODUCTION AND TROUBLE FREE OPERATION . . .

The bulletin illustrated on this page is free. We invite you to send for it. It describes in complete detail the new Hunter #26 High Speed Fulling Mill with numerous new attachments not before obtainable. The bulletin will describe how these stainless steel Fulling Mills save wet finishing costs and reduce dead loss. Smooth polished surfaces cut flocking. More weight is delivered in cloth and less down the drain. It describes how stainless steel linings, guides, stop motions and crimping boxes, sectional rubber rolls and hydraulic tension for top roll, eliminate practically all ordinary repairs, plus lost production time due to breakdowns.

It describes in detail a revolutionary new method of applying weight to crimping box tongues with all adjustments in the front. In addition the brochure describes how Hunter Stainless Steel Mills can give twice to four times the former capacity—how uniformity is greatly improved and production increased, often to the point where twice the load is handled in ⅔ or even half the time.

A request from you on your letterhead will bring this new brochure to you. There is no obligation of any kind.

JAMES HUNTER MACHINE CO.
NORTH ADAMS, MASSACHUSETTS, U.S.A.
FOUNDED 1847

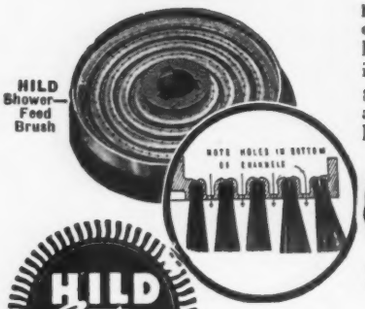
HILD Floor Machines
KEEP ALL YOUR FLOORS
Clean AND *Slip-Safe*

Left—HILD Tank Type Shower-feed Floor Machine

Right—HILD Plain Handle (Standard) Floor Machine

HILD Floor Machines are designed for use with the easily interchangeable attachments pictured below to condition and maintain floors of all kinds . . . either in the mill or in office areas. Scrubbing with the Tank-Type Machine and the patented HILD Shower-feed Brush gets floors cleaner with less scrub-soap solution . . . cuts soap costs . . . does not splash water on machinery or furniture. Scrub-soap solution is fed from the tank on the handle of the HILD Floor Machine to the back of the Shower-feed Brush . . . then passes through accurately spaced holes **penetrating the brush back between each row of bristles.**

HILD Floor Machines speedily scrub open areas in lanes between machines . . . yet are easily guided into hard-to-reach spots under and around machinery. They are sturdily built for long, trouble-free service.



HILD Shower-Feed Brush

Brush for Waxing or Polishing

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Rayon Yarns

Filament and Spun Rayon Yarns dyed and twisted to your specifications.

ROBISON PROCESSING COMPANY, Inc.

BOSTON, MASSACHUSETTS

New York Sales: 450 Seventh Ave.

ducer has lowered the price of one of his tire yarns and of all types of his rayon tire fabric. Independent companies which twist and weave tire rayon are now charging 6 to 8¢ per lb. less for conversion than during the war. On the other hand, some cotton tire-cord fabrics have been permitted an increase in ceiling price. The net result has been that rubber manufacturers say they can make a tire cheaper today with rayon cord than with cotton cord.

Motor Checks

(*Continued from page* 125)

load is due to the machine being out of line, or out of level, the foreman has corrections made by the overhauling crew; and later the electricians check the motor again and compare loads. Whenever a fault is found in the motor itself (which is seldom the case) or whenever the cause of an apparently over-loaded condition cannot be located readily, the motor is taken off the line and sent to the testing laboratory for more exhaustive investigation and testing.

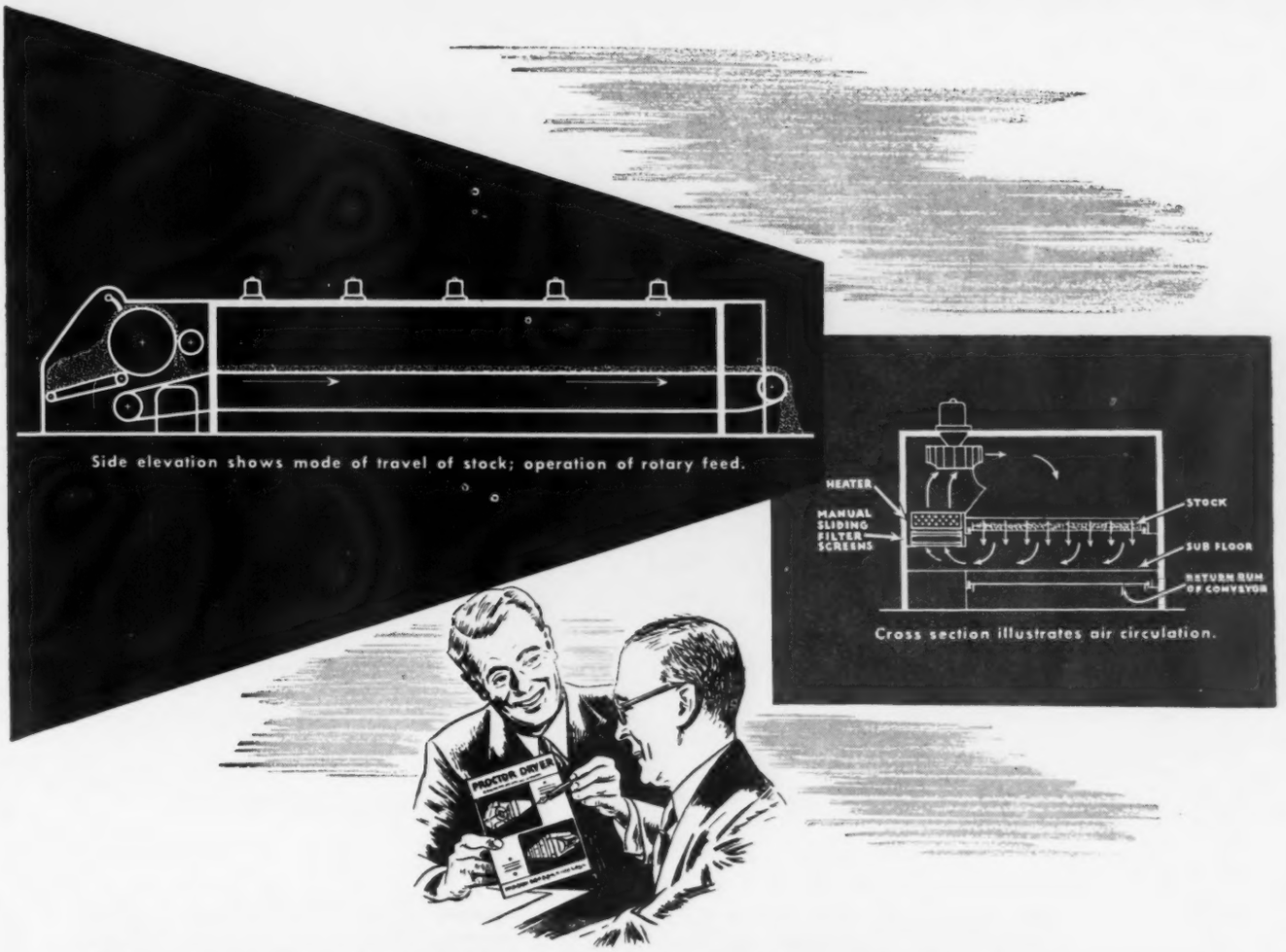
The over-hauling crew mentioned above consists of a few highly-trained machinery erectors who are expert in the practice of placing, setting up, and starting machines. There is one such crew assigned to each section of the plant, and it works independently of the electricians. However, the two groups cooperate closely in connection with all such situations as have been mentioned.

Experience with circuit breakers has developed our practice of silver-plating the copper elements whenever we find over-heating due to poor mechanical contact. This can be done without removing the circuit breaker from machine or wall, and without regard to size. So many circuit breakers have been corrected in this way that we are considering plating all contact throughout the plant, ranging from 12,000-amp. breakers on our turbo-generator down to the fractional horsepower units on some of our machines.

The normal load for the mill and village is 7,000 kw. or 13,500 kwh. a day. This load is taken care of by a 6,000-kw. turbo generator; the balance of the power is purchased from the Georgia Power Co. Current is also purchased for holidays and week ends. Current is generated at 550 volts, three phase, 60 cycles. In addition to the electric power generated, 1,000,000 lb. of steam a day is furnished for processing purposes, most of this being bled from the turbines. Both power plant and service crews are under the direction of our chief engineer, James F. Mathis.

Throughout our plant, we are using motors of many makes, sizes, ages. Some are as old as 27 years. Due, we think, to

(*Continued on page* 212)



The answer to Quick, Thorough Stock Drying

PROCTOR *Impact* DRYER

To meet the demands of the textile industry for a compact dryer that would dry *all* fibrous materials uniformly and in large quantities, Proctor engineers developed the Proctor Impact Dryer. The principle of impact drying is the impingement of heated air at high velocity on the material as it is conveyed through the dryer. This air-circulation agitates the stock, keeping it in motion during the drying process. Add to this unique method of air circulation the fact that the conveyor for carrying the material through the dryer is made up of perforated metal plates and it is easy to see how this makes possible the removal of moisture, uniformly, all the way through the material. Not only is uniform drying assured—but output is greatly increased. Uniform feeding is accomplished by means of an automatic rotary type feed which is geared to operate at sufficient speed to meet the increased capacity of the dryer. Unit construction permits building dryer suited to individual output requirements. Write for details today.

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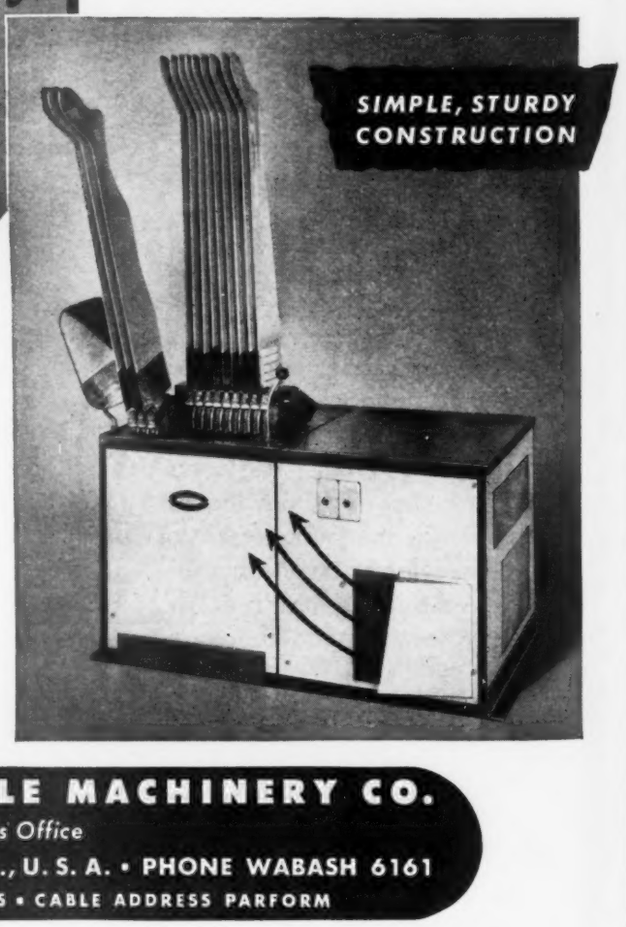
PARAMOUNT'S *Hi-Speed* MACHINE

for FASTER Finishing of Women's Hosiery

A complete operating unit as modern as the hosiery it finishes!

This fast-action machine offers speed of operation to meet that of the individual.

- No waiting for mechanical action
- Individual steam pressure and heat control
- Easy to operate . . . note tilted position of forms
- 3-at-a-time stripping speeds production
- Close alignment of forms aids drying
- Stainless Steel Forms eliminate fabric flaws
- Efficient All-in-One Hosiery Cabinet includes Piling Shelf and Wet Goods Trough



NEW! *Air-Cooled!*

Cool air directed upward through a vent adds to the operator's comfort and facilitates hosiery drying. This increased air circulation aids in lowering the room temperature — contributes materially to the efficiency and comfort of the operator.

Write for further particulars

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MANUFACTURERS' BULLETINS

READERS interested in literature reviewed on these pages may secure copies with time-saving postcard below. Mark what you want on it and send it to Textile World, 330 West 42nd St., New York 18, N. Y. Be sure to give your name and company connections.

Free FOR THE ASKING

1. Chemistry in textiles, with special emphasis upon the history of dyeing and finishing fabrics, is presented in a booklet published by the Burkart-Schier Chemical Co. The booklet is composed of 24 prints, each of which is illustrated and devoted to one phase of the development of modern textile chemistry.

2. "Your Unseen Friend," a well-illustrated booklet published by the International Nickel Co., Inc., describes the important part played by nickel in several businesses and industries. It is said that the company is fully converted from wartime to peacetime production.

3. An adhesive for locking together shipping units of corrugated- or solid-fiber cases, wooden boxes, etc., is described and illustrated in a handbook published by National Adhesives, Div. of National Starch Products, Inc. The handbook also contains a blue print of the automatic adhesive applier.

4. "Alcohols," a new booklet published by Carbide and Carbon Chemicals Corp., contains information on fifteen synthetic alcohols produced by the company. The booklet lists properties, specifications, shipping data, and information about the uses of alcohols.

5. Durable glazes on chintz, produced by using melamine formaldehyde resins, are announced in a bulletin published by the American Cyanamid Co. The glazes are said to withstand such severe treatment as boiling for a half hour in soapy water.

6. A training program for knitting-mill fixers is explained in a reprint of an article which appeared in TEXTILE WORLD and which is being made available by the U. S. Department of Labor. Eighteen provisions of the training program planned by Holeproof Hosiery Co. are outlined.

7. Cleaning sewers and drains with a machine driven by electricity or gasoline is described in a 6-page folder issued by Kollmann Mfg. Co. The machine and many of its parts are illustrated with photographs.

8. "An Engineer Looks at ILG" is the title of a well-illustrated booklet published by the ILG Electric Ventilating Co. which gives a word and picture story of what a consulting engineer saw during a tour of the ILG plant. All phases of the manufacture of ventilating equipment are described.

9. More light at less cost through proper cleaning, relamping, and inspection and repair of equipment is discussed in a book review appearing in the January, 1946, Wesco Reporter, published by the Westinghouse Electric Supply Co. A cleaning schedule for a typical manufacturing plant is given.

10. Storage batteries for use on industrial trucks and tractors are featured in a catalog published by the Gould Storage Battery Corp. The construction of the batteries and an explanation of the action that takes place inside a battery cell are given.

11. Applications of plastics are described in Vol. 4, No. 1 of *Celanese Plastics*, published by the Celanese Plastics Corp. Several plastic products are illustrated with photographs.

12. Recording and indicating instruments for measurement and control are fully described and illustrated in Catalog No. 370 issued by the Foxboro Co. The company's Dynalog electronic instruments are included for the first time in the catalog.

13. High-frequency heating of dielectrics. is explained in non-technical language and illustrated with photographs in a 24-page booklet issued by the Thermex Div. of the Girdler Corp. The booklet points out that "high-frequency heat originates in the material" and is not applied to the material.

14. An industrial canteen especially designed for convenience and compactness, is pictured in Vol. 8, No. 1 of *Steel Horizons*, published by the Allegheny Ludlum Steel Corp. Schematic drawings are used to explain the design.

15. A hand lift truck, especially convenient when operating in crowded quarters, is described in a new loose-leaf catalog folder published by the Revolvator Co. The truck is constructed so as to permit raising the load with the handle at an angle through 250°.

16. "Tailoring in Metal," a 20-page illustrated booklet published by the United Welding Co., contains a discussion of the factors affecting the choice of welded fabrication and the techniques of welded design. The purpose of the manual is to help engineers and designers decide welding problems.

17. Alrosol, a detergent and wetting agent of the fatty amide type, is fully described in a technical bulletin published by Alrose Chemical Co. Various properties and uses of Alrosol are presented.

18. A tubing machine which processes up to 250 yd. per min. is described in literature released by the Van Vlaanderen Machine Co. The construction and operation of the machine are explained.

19. Textile processing with Quadrafos is described in a new folder issued by Rumford Chemical Works. Properties, characteristics, and uses of Quadrafos, a trade name for sodium tetraphosphate, are discussed.

20. A softener for use with wool, cotton, or synthetic fibers is the subject of a technical bulletin issued by American Cyanamid Co. Known as Aerotex Softener H, the new product is said to be unaffected by laundering and dry cleaning.

21. Feed-water control for high-duty boilers is the subject of a booklet published by the Northern Equipment Co. Schematic

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drawings and photographs illustrate the company's Flowmatic control system.

22. Heat treating metals for a variety of industrial applications is discussed in well-illustrated literature released by Lukens Steel Co. Stress relieving, annealing, and normalizing are among the types of treatment explained.

23. Business engineering case histories are given in "20 Years of Trouble," published by George S. May Co. Specific business problems and their solution are discussed.

24. Fiber-bonded processes and machinery developed for utilizing the processes are described in a 14-page, vest-pocket size booklet issued by Riverside and Dan River Cotton Mills, Inc. Applying pigment dyes during processing is also explained.

25. Lifting and transporting tools and raw materials is the subject of Circular No. 30 100, published by Lewis-Shepard Products, Inc. The Handy Hoister is said to be equipped with several new features.

26. "Geon Polyvinyl Materials," a 16-page booklet published by the B. F. Goodrich Chemical Co., outlines suggested applications and gives full details of the properties of the company's Geon plastics. Four resins (two polymers and two copolymers of vinyl chloride) are described.

27. Three ways to cut cost are pointed out in Vol. 13, No. 1 of *Link-Belt News*, published by the Link-Belt Co. Replacement of old machinery, establishment of incentive pay systems, and harmonious labor relations are the three methods discussed.

28. Choosing the most suitable source of heat for processing requirements is stressed and a chart for guidance is given in "We Think You Ought to Know," published by J. O. Ross Engineering Corp. The B.t.u.'s obtained for 1¢ from various heat sources are given in a heat-cost comparison chart.

29. Improving cotton and rayon cloth by applying Ceglin, a new cellulose ether finish, is described in a booklet published by Sylvania Industrial Corp. Five different types of Ceglin are presented.

30. Maintenance machines for use on industrial floors are described in a 24-page catalog issued by General Floorcraft, Inc. The machines are said to be tooled to tolerances of one ten-thousandths of an inch.

31. "Creels by Reiner," a 12-page booklet issued by Robert Reiner, Inc., illustrates and describes several types of creels for use in textile plants. Drawings, tables, and photographs are used to illustrate the creels.

32. Fluorescent luminaires a 2-light and 4-light units and of open types for installation in rows are the subject of Catalog No. 285, issued by the Mitchell Mfg. Co. Most of the models are available with or without the instant starter.

33. An air diffuser to eliminate drafts in air-conditioned rooms or plants are described in a bulletin issued by the Anemostat Corp. of America. The Anemostat air diffuser is also said to equalize temperature and humidity inside an air-conditioned enclosure.

34. Gas for industrial heating and specific examples of how industrial and commercial users of gas have benefited are presented in a booklet published by the American Gas Assn. The booklet is composed of preprints of national advertisements.

35. Industrial research and the background and function of Arthur D. Little, Inc., are the subject of an illustrated booklet published by that company. The importance of the consulting laboratory as a supplement to a progressive company's own laboratory is pointed out.

36. Standard motors and generators made by Star Electric Motor Co. and the company's facilities for building special motors are the subject of an 8-page bulletin issued by the company. Illustrations show typical applications of Star motors.

37. "New Developments in Permanent Cellulose Finishes," an article being issued in reprint form by the Dexter Chemical Corp., describes several solutions and methods of applying cellulose finishes. Finishes for several constructions of fabric are given.

38. Welding accessories for several types of equipment are listed in a catalog issued by Air Reduction Sales Co. Accessories for welders are also included.

39. Spray nozzles for cooling condensing water, for air-conditioning service, and for other industrial processes are described and illustrated in a 16-page bulletin published by Yarnall-Waring Co. Tables and charts give information to aid in selecting the nozzles needed for a particular purpose.

40. A new anthraquinone vat dye, said to possess exceptional fastness to light, chlorine, and water spotting, is called "Calcosol Gray 2G Double Paste," in a folder issued by the Calco Chemical Div., American Cyanamid Co. Several swatches of dyed fabric are pasted in the folder.

41. Handling boxes, barrels, bags, and bales is discussed in bulletins issued by the Elwell-Parker Electric Co. The bulletins are said to approach each type of load from the standpoint of the most economical method of handling it.

42. "The Incandescent Lamp," the title of No. 2 of the *"Know How" Lighting Series*, published by Westinghouse Electric Corp., is said to be a digest of facts and data on the lamp. Lamp specifications for a number of uses are given.

43. Dyeing wool by the Calcomet process, said to be a scientifically evolved metachrome method for the application of selected dyes to wool, is the subject of Bulletin No. 781, issued by Calco Chemical Div., American Cyanamid Co. Liquor ratios and percentages of dyes for a number of applications are given.

44. The barium activity number of cotton, determined by the amount of a weak solution of barium hydroxide absorbed by mercerized and unmercerized cotton, is explain in a booklet on testing for mercerization published by the Dexter Chemical Corp. The presence of dye does not neutralize the effectiveness of the test.

The numbers on the postcard below correspond to the numbers of the descriptive paragraphs in this insert.

Check the numbers of the catalogs you want, **and fill in your name and address *legibly* and *completely*.**

The postcard requires no postage. After filling out

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My Name ..... Title .....
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If you own a Scott Tester, pass this ad along to your Maintenance Man. Complete set of previous Data Sheets will be sent you free upon request.

MAINTENANCE DATA SHEET NO. 2

CALIBRATION OF SCOTT TESTERS (Con.)

If a high reading results from checking the recording head (per Data Sheet No. 1), there are 3 causes: 1. On earlier testers, the weight—held by a set screw—may have been raised closer to the pivot of the pendulum. 2. Mass may have been removed from the weights. 3. The weight may have been removed and put back on the pendulum upside down.

If a high reading cannot be corrected by adjusting the position of the weight, it is advisable to send the head of the tester to the manufacturer for recalibration.

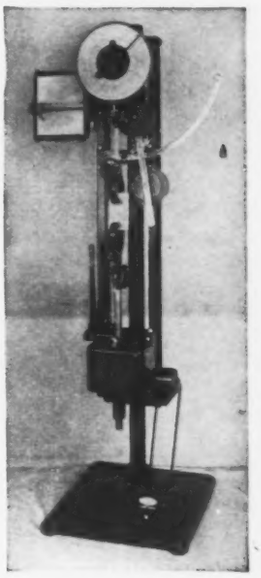
Usually any error found in calibrating is a low reading, generally caused by undue friction within the head mechanism. First check the bearings holding the head shaft. These are lubricated with a special grease, in which dirt and lint may accumulate after years of service. To clean, remove bearings from the head and wash carefully in gasoline or commercial solvent. After washing, cup the bearing in the palm of the left hand so that the inner race does not rub against the skin; place the right thumb against the inner race with moderate pressure, revolving it slowly. Any particles of rust or foreign matter can thus be felt. To produce a good calibration, the bearings must be entirely clean of any material that would impair free rotation.

After cleaning, lubricate the bearing with a very small amount of white vaseline. Never use gear lubricants or machine oil, which tend to oxidize upon exposure.

Model J

***SCOTT TESTER**

for single end, skein, fabric and burst tests.



The many models of *Scott Testers serve the varying requirements of the Textile Industry for tensile, hysteresis, crepeage, twist, burst, flexing, etc., from single fibre to 1 ton tensile. Model J, illustrated above, has capacities up to 500 lbs. for tensile, hysteresis and burst tests. Other models have capacities up to 1 ton tensile. Scott Testers produce literal stress-strain diagrams in the form of picturized graphs which are easily readable and provide convenient records to file as historical records.

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NEW CATALOG No. 45
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JUST PUBLISHED
Request Your Copy

Contains full description of numerous standard physical testing methods and machines – plus a wealth of related reference data.

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95 Blackstone St., Providence, R. I.

Scott Testers — Standard of the World

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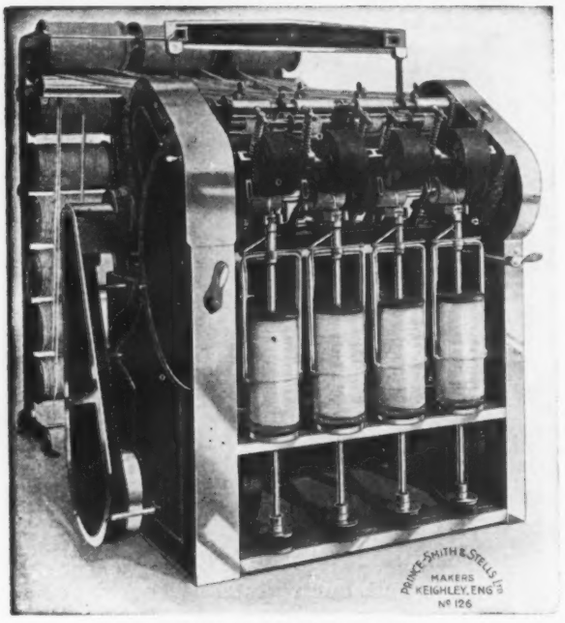

ENGLISH DRAWING BOX

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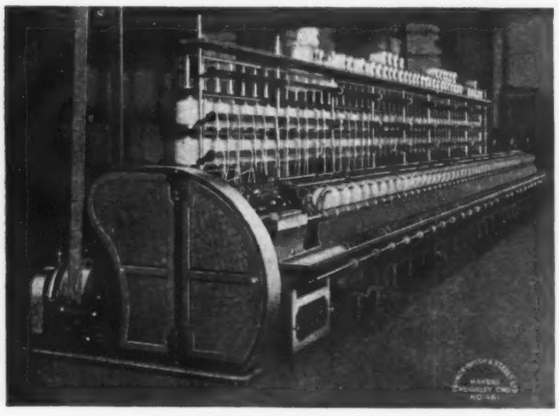

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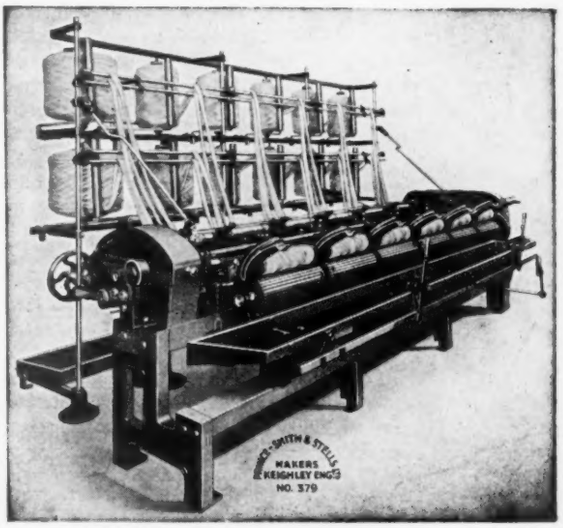

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WHEN YOU ARE CONSIDERING ANY EXTENSIONS OR ALTERATIONS TO YOUR PLANT MAY WE HAVE THE PLEASURE OF OFFERING YOU OUR SERVICES.

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Golden Anniversary

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HENRY GAUNT
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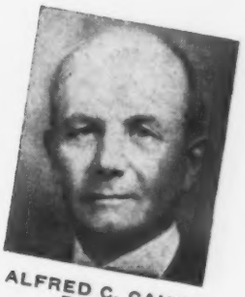
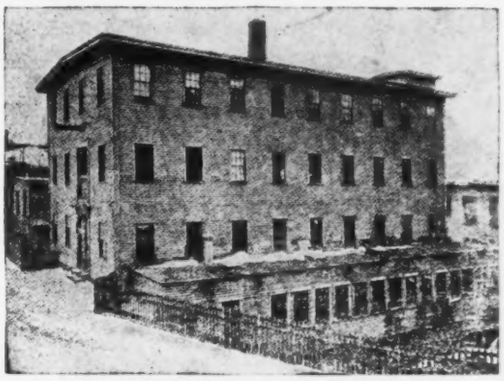
1856—1906

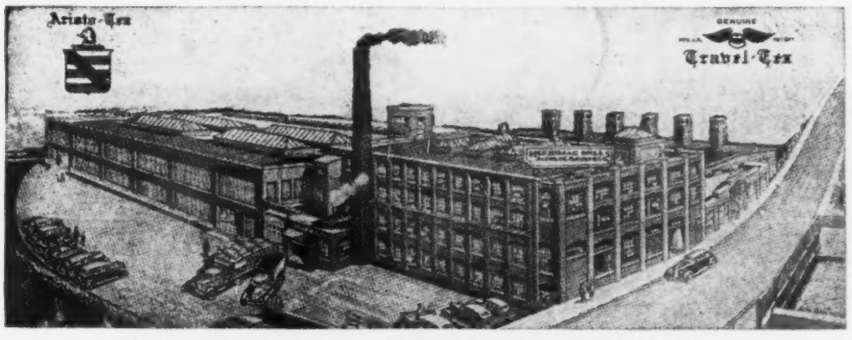


ALFRED C. GAUNT
President



Original Plant From An Early Print

With a family heritage of the woolen business dating back to 1790 in England, the late Henry Gaunt moved to Methuen in 1895 and established a mill which marked the beginning of the present day business. His son, Alfred C. Gaunt, became the active head of the Merrimac Mill in 1906. The most recent modernization of the plant has been developed and directed by Abbot Gaunt of the third generation, who is the present General Manager.



Drawing Shows Expansion of Merrimac Mills From Original Size

We celebrate our fiftieth anniversary with a profound appreciation of the obligation we owe to—our many friends, our neighbors in Greater Lawrence, our suppliers, our employees, and our customers for their cooperation and indulgence over these fifty years.

We have produced an American Fabric equal to, or superior to, any made anywhere in the world.

As we look ahead to future anniversaries, we pledge ourselves to continued service to this community and to the ideals upon which this business was founded.

Merrimac Mills Company

Methuen, Massachusetts

Manufacturers of Fine Worsted Fabrics in Methuen for Fifty Years

BOOTH
Quality Card Clothing
Aids Your Cost Record

By developing the full efficiency of your cards, BOOTH QUALITY CARD CLOTHING makes a definite SAVING in your production costs. We suggest you try it.

A complete line including Cylinder Clothing, Doffers, Workers, Strippers, Tumblers, Fancies, Rings, Lickerins, Feed Rolls, etc.

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TANKS

For over 80 years the Southern textile industry has looked to Cole for design, fabrication and erection of elevated tanks for sprinkler and general service.

Based on long experience with textile requirements, Cole elevated tanks are *correct* in design. Their simplicity contributes to their low cost of maintenance.

Our experienced engineering department is at your service to assist in solving your problems. Write for our general catalog—— "Tank Talk."

R.D. COLE MFG.CO. ESTABLISHED 1854
Newnan Ga.

(*Continued from page 204*)

our constant and careful inspection, some of these older motors have been in constant service without a single burnout. Others of the older type have required rewinding, resulting probably from gradual drying out of the insulation rather than to neglect or abuse on our part.

Inspection pays!

Acetylated Cotton

(*Continued from page 117*)

pletely buried horizontally in special indoor beds[9], in which cotton osnaburg containing copper naphthenate equivalent to 1% copper lost 30% of its strength in six weeks' burial.

2-YEAR TESTS. Sandbags that had been made from acetylated cotton cloth and thread, piled in small stacks on the ground, remained intact after two full years of exposure in New Orleans (Fig. 2). Only fabrics of the higher acetyl contents survived the most severe rotting conditions, two years' exposure in a bag with enriched compost filling in contact with the ground at the bottom of a stack. Acetyl contents were 29 to 30% and the retention of strength 35 to 40%. The bottom surface of such a very resistant bag is shown in Fig. 3.

The surface fabrics of the bags at the top of stacks fully exposed to the weather for two years retained from 35 to 100% of their breaking strengths, while untreated bags with similar exposure lost all strength within one-fourth of that time. The amount of strength retained is dependent upon the method, as well as the degree, of acetylation. The relative improvement in the weather resistance obtainable by a suitable method of acetylation has not been estimated from the present data because the best treated fabrics have shown no loss of strength, while the untreated control fabrics lost strength not only through weathering but also from the synergistic action of weather, soil, and microorganisms.

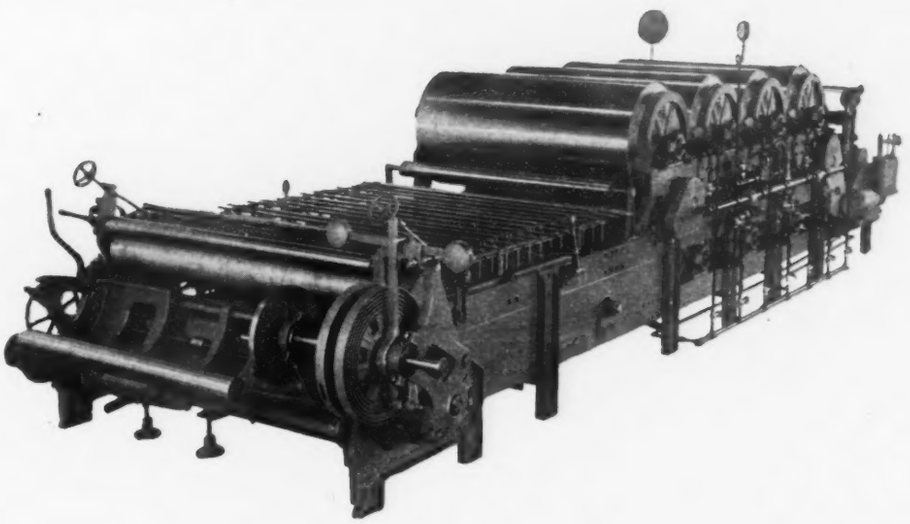
In comparative cases, thread of 23 to 25% acetyl content after the two years' exposure in seams in the bags retained 63 to 86% of its strength, while thread treated with 14% of copper naphthenate had completely disappeared or was so weak that it could not be recovered for testing. The bag of which a portion is shown in Fig. 4 was made from osnaburg treated with 2.4% of copper by the cuprammonium process. The thread survived, although at some points the fabric rotted entirely away from the seams.

The first objective of this research was to obtain highly resistant cotton to demonstrate the possibility of making cotton sandbags with a life of two years. The tests showed that reaction with 20

EFFICIENT MILLS

Depend On—

JOHNSON WARP SIZERS



FOR HIGHER HOURLY PRODUCTION OF SUPERIOR WARPS—

WITHOUT BREAKDOWNS

When you want a slasher that will assure higher hourly production of superior synthetic yarn warps, without mechanical breakdowns, you, too, will select the Johnson sizer.

With it you will get fewer broken ends in slashing, and fewer stoppages to leave marks on the warps and slow down production.

With better warps, loom production of better fabrics will be increased.

N. B. *Facts and Figures,* **furnished us by our customers, which, due to space limitations, cannot be given here, will be gladly shown you on request.**

Charles B. Johnson MACHINE WORKS

PATERSON NEW JERSEY

SYLVANIA INDUSTRIAL CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 East 42nd Street, New York 17, N. Y.
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CEGLIN*

(alkali soluble cellulose ether)

Finish for Textiles

Increases the Intrinsic Value of Fabrics

- **Provides a finish of distinguished character.**
- **Stands up under laundering.**
- **Adds tensile strength.**
- **Stabilizes shrinkage and stretching.**
- **Increases resistance to slippage or distortion.**
- **Makes possible a wide range from softness to crispness.**
- **Improves resistance to abrasion.**
- **Helpful in solving manufacturing problems.**

For additional information write for technical booklet giving complete directions on uses and applications of Ceglin.

SYLVANIA
TEXTILE FINISHES

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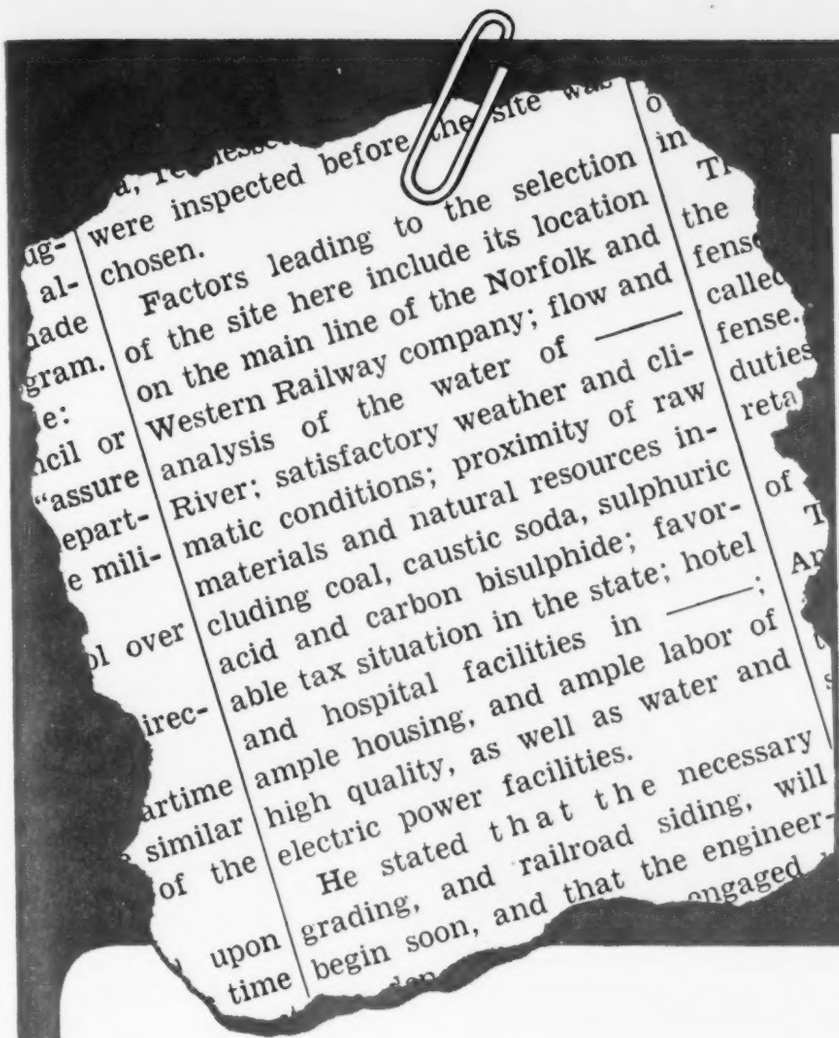

were inspected before chosen.

Factors leading to the selection of the site here include its location on the main line of the Norfolk and Western Railway company; flow and analysis of the water of ——— River; satisfactory weather and climatic conditions; proximity of raw materials and natural resources including coal, caustic soda, sulphuric acid and carbon bisulphide; favorable tax situation in the state; hotel and hospital facilities in ———; ample housing, and ample labor of high quality, as well as water and electric power facilities.

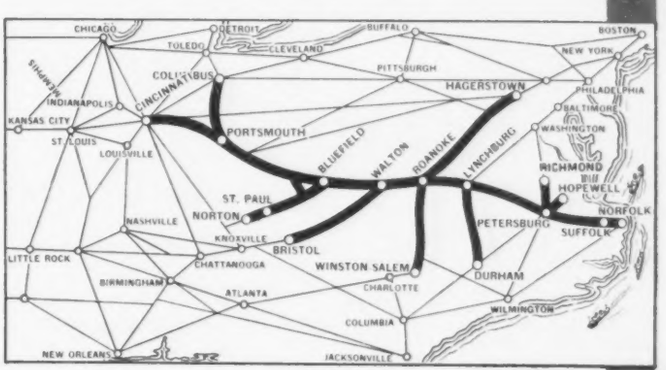
He stated that the necessary grading, and railroad siding, will begin soon, and that the engineer-

WHY

ONE OF THE COUNTRY'S LARGEST TEXTILE INDUSTRIES SELECTED N. & W. TERRITORY FOR PLANT LOCATION

From an address made by the General Manager of the corporation before the Chamber of Commerce, as reported in the January 12 issue of a daily newspaper published in Norfolk and Western territory.

This is our story — as told by an eminent textile authority after investigating 27 plant locations in other parts of the country. To it we have little to add, except that the N. & W. maintains an Industrial and Agricultural Department specifically charged with acquainting industries with the many sites in N. & W. territory favorable to the location or relocation of textile plants. The department is ready and anxious to furnish important facts and figures. Write the Industrial and Agricultural Department, N. & W. Railway, Roanoke 17, Va.



Norfolk and Western RAILWAY

FOR BETTER PLANT LOCATIONS

For Peroxide Continuous Bleaching

choose

PURE STAR SILICATE

The purity of Star Silicate insures the even release of oxygen from peroxide. With silicates of lower purity standards, the oxygen comes off too rapidly, thus resulting in waste.

Star's purity is not due just to filtering. It's free of other matter that might cause the solution to "break," throwing down a precipitated floc. Hence, the troublesome scale which forms with impure silicates is avoided.

Star Silicate is the No. 1 assistant for peroxide bleaching in either batch or continuous systems. Consult us now about your silicate requirements.

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Sterling Ring Travelers

EXAMINATION

Do you ever examine your worn Travelers?

They might show wear that could be eliminated.

Send some of them to us, with a ring. Let us send a trial sample.

Southern Representatives

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STERLING RING TRAVELER CO.
FALL RIVER, MASS.

(*Continued from page 212*)

to 30% of acetyl is required to make cotton withstand the decomposing action possible in Louisiana muck soils. A suitable treatment supplying 15 or 20% acetyle may suffice, however, if the bags are filled with sand and are not in direct contact with the ground. That resistance to rotting depends upon the amount of acetylation is also illustrated by data presented in Table II for gray cotton yarns tested by indoor burial.

Yarn with the lowest acetyl content shown in Table II (19%) may seem to have only moderate rot resistance, but it is much more resistant than typical copper naphthenate-treated yarn. Yarn with a relatively high acetyl value (30%) was extremely resistant up to practically a year, when the test was ended. Acetylations to such high degrees are not required for many purposes; cloth with far lower degrees of acetylation maintained practically full strength in tests with specific microorganisms which completely degraded the unacetylated controls. (Table III.)

Equal percentages of acetyl do not always impart equal degrees of resistance to rotting in the burial test. While variations in test results may be due partly to unavoidable variations in the soil beds, and partly to the use of different lots of cotton, they are probably largely due to differences in the conditions of preparation and acetylation which cause a difference in distribution of acetyl groups within the cotton cellulose. Another factor obviously affecting quality is possible degradation of the cellulose during acetylation. From the available evidence it appears that the quality of the acetylation may be fully as important as the amount.

LITERATURE CITED

1. Blow, C. M., and Knight, W., *J. Textile Inst. Proc.*, 35, 12 (1944).
2. U.S.D.A. Agricultural Research Administration, Bureau of Agriculture and Industrial Chemistry. *Report of the Chief of Bureau*, p. 29, 1943.
3. Cross, C. F., and Bevan, E. J., *Researches on Cellulose 1895-1900*, p. 40, London, Longmans, 1901.
4. Chippindale, E., *J. Soc. Dyers & Colourists*, 50, 142-149 (1934).
5. Doree, C., *Biochem, J.*, 24, 709-714 (1920).
6. Thaysen, A. C., Bunker, H. J., Butlin, K. R., and Williams, L. H., *Am., Applied Biol.*, 26, 778 (1939).
7. Thaysen, A. C., British Patents 399,952 (1933); 411,930 (1934); and 486,901 (1938).
8. Am. Soc. Testing Materials Standards 1944, Part III *Non-Metalic Materials*. D684-42T, 1973-6.
9. Dean, J. D., Strickland, W. B., and Berard, W. N., *Am. Dyestuff Reptr.*, 34, 195-201 (1945).

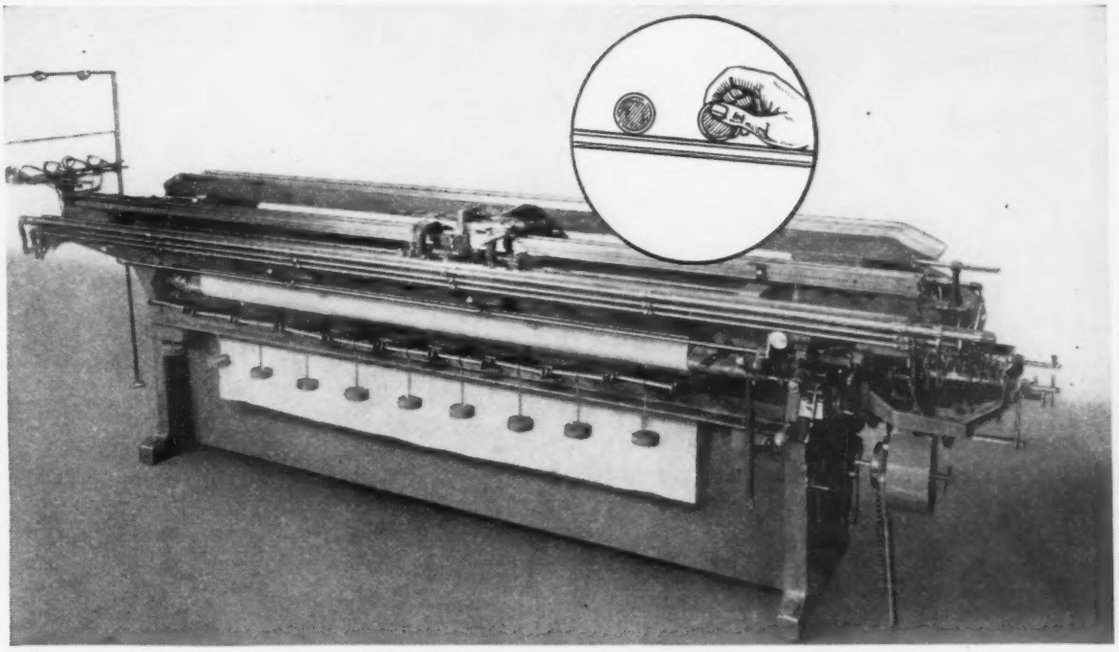
NOTES

The scope of this investigation necessitated the cooperation of several divisions of this laboratory. The authors are indebted therefore, to many members of the staff for assistance in a large amount of the work.

Present address of Samuel T. Voorhies, Jr., is Rigo Mfg. Co., Nashville, Tenn.

The Southern Regional Research Laboratory is one of the laboratories of the Bureau of Agricultural & Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

PURL STITCH KNITTING MACHINE



freedom from vibration

Balancing a coin for hours at a time while the carriage is operating to and fro—reversing at each course demonstrates *freedom from vibration* a most important feature of these machines. It's a characteristic, too, of all machines designed by L. Robaczynski and Associates.

THE NEW VERSATILE HIGH SPEED TRICOT MACHINE

under development since before the war is so designed to withstand speeds in excess of 500 courses per minute in a 180 inch width with an absolute minimum of vibration. Any operator knows what that means translated into quality of the fabric, production and maintenance of the machine.

The new Robaczynski two bar, 26 and 28 gage, Tricot machine has many novel features and improvements unlike any other Tricot warp knitting machine. It will soon be ready for demonstration in our new show room at the plant. Write or telephone us for an appointment.

ROBACZYNSKI
MACHINE CORPORATION
PURL STITCH (Links and Links) and FLAT KNITTING MACHINES

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Reach High!

Dunno why, Junior, but that's the way it is sometimes with the worthwhile things of life—they dangle enticingly just beyond your fingertips and you have to reach for them.

Take Pacific Sheets, now. Mommy's been treasuring her prewar supply for months, always hoping that soon they would be plentiful again. She could have had X sheets or Y sheets, but no. Mommy reaches high, and nothing but fine Pacific Sheets will do.

We are glad to be able to report that soon they will be available in quantity again—the same strong, soft, snowy-white *balanced* sheets she bought before the war. At good stores everywhere, moderately priced.

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Made by the makers of Pacific Factag Fabrics—Cottons and Rayons

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BALANCED PACIFIC SHEETS

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DC SILICONES *Keep 'em running* —in spite of moisture

Direct connected to a centrifugal pump and repeatedly subjected to overloads, this 7½ h.p. SILICONE INSULATED motor is frequently hosed off to remove encrusted salts. It's still in service after two years. Class B insulated motors lasted only six to nine months here.

. . . plus repeated overloading for 2 years' continuous operation

By reducing motor failures caused by excessive moisture—plus heat from overloading—Silicone Insulation can cut *your* maintenance costs.

Easy to apply without special equipment, the new DC 996 Insulating Varnish bakes at 300° F., like many organic varnishes. For a complete job of Silicone Insulation, silicone bonded inorganic insulating materials are commercially available from leading distributors.

There's a cost-saving place for Silicone Insulation wherever insulation failures result from repeated overloads, excessive moisture, and exposure to chemical dust, fumes, and most chemicals. For full details, contact Dow Corning.

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FIRST IN SILICONES

DOLGE *Tested* PRODUCTS

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More than fifty years' experience, latest laboratory equipment and continual research is behind Dolge Tested Products. Whatever your maintenance problem, (insecticides, disinfectants, deodorants, cleaners, floor finishes and ground materials) Dolge dependable products will serve you efficiently and economically.

- **ALTA-CO POWDER** For Athlete's Foot control.
- **BAN** A cleaning powder. Works in hard water.
- **BRITEWAY** A liquid cleaner that leaves a pleasant cedar aroma.
- **BALMA** A mild, smooth soap for the skin.
- **DEODOROMA** Deodorizing blocks. Five bracing scents: rose, carnation, new mown hay, sandalwood, cedar.
- **TILEBRITE** Removes rust stains easily and quickly.
- **DOLCOROCK** A high gloss floor finish. Resistant to water.
- **DOLCOWAX** A long lasting floor finish that needs no polishing.
- **BETAFORM** For hard-shelled insects. Kills on contact.
- **TINK** Clears clogged or sluggish drains.
- **FLUSHOUT** A cleanser for bowls.
- **WIND-O-SHINE** Makes it easy to clean windows.

And many others . . .

This is only a partial list of dozens of Dolge products.

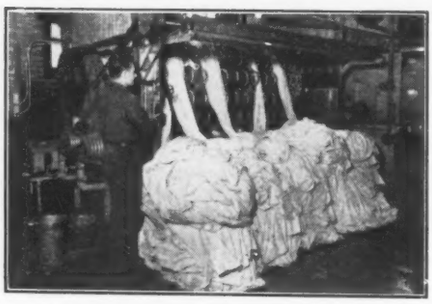
Write today for the Dolge catalogue. It contains the solution to dozens of health and maintenance problems.

The C. B. DOLGE CO. WESTPORT, CONNECTICUT

DEATH TO DISEASE DOLGE

The Fleet Line

Type TLBT PIECE DYE KETTLE



Installation in prominent New England mill making knitted outerwear fabrics.

5 UNIQUE IMPROVEMENTS

1. Nearest thing to universal kettle ever offered. Handles all types of woolens and worsteds from 5 oz. flannels to heavy knitted ski cloth. • 2. No tangles or tie-ups due to tub-design and large drum type Multi-Grip reel (patented). • 3. Wrinkles, creases and dye streaks virtually eliminated, because goods move around and change folds readily. • 4. No slip, due to Multi-Grip reel. • 5. Savings in dyestuffs up to 10%.

RIGGS AND LOMBARD

FOOT OF SUFFOLK ST., INCORPORATED LOWELL, MASS.

Cotton Mill Fires

(*Continued from page 131*)

the garnetted waste or sliver were equipped with oscillating combs, the loss per pound of cotton handled was only 66% of the average. Where oscillating combs were not used, the loss per pound of cotton handled was 128% of the average.

A further interesting return from the survey showed that the mills which ran all sliver waste through either a garnetting machine or picker section had only 55% of the average amount of loss per pound of cotton handled.

Underlying most of the statistics was the fact that waste has to be well broken, and the most positive method offered by the survey was to pass the waste through a separate machine having a beater section, or through a garnetting machine. Unless the waste is broken into small bits, the strands of drawing or roving will wrap around bearings, choke the machines, and cause friction fires.

A number of mills have recently eliminated the bottom apron in hopper feeders in favor of a curved or flat steel plate which extends from the front top of the feeder to the bottom of the lift apron at the back. From a fire prevention standpoint, this change has a number of advantages. There is no bottom slatted apron to become damaged in case of fire, the floors are kept cleaner, the feeders are of less capacity, and maintenance of the bottom apron is eliminated.

PICKING EQUIPMENT. Picker-room equipment does not cause an excessive number of fires. With proper maintenance—which will be discussed in a later article—picker-room equipment is relatively free from fires.

One other factor applicable to both opener and picker rooms was discovered in the analysis of the operating hours reported by the various mills, as shown in Fig. 2, page 129.

The average number of working hours per day in the mills surveyed was 20.16, and the number of fire losses varied directly with the number of hours of operation. For instance, when the number of operating hours was doubled the number of fires was also doubled.

Loss per pound of cotton handled, however, decreased with the hours of operation up to 15 hours, or two shifts —increased with the increased hours.

The amount of loss per mill remained fairly constant up to 18 hours of operation, and then increased.

These trends indicate that three-shift operation greatly increases the loss possibility; and mill executives have pointed to the lack of training on the part of

(*Continued on page 224*)

Above map does not attempt to show all products available in the various states

For more than 75 years, Union Pacific has served thirteen western states . . . been a partner in their development.

This vast territory might well be called both the bread-basket and treasure-chest of the nation in that it provides a boundless supply of both agricultural and industrial products.

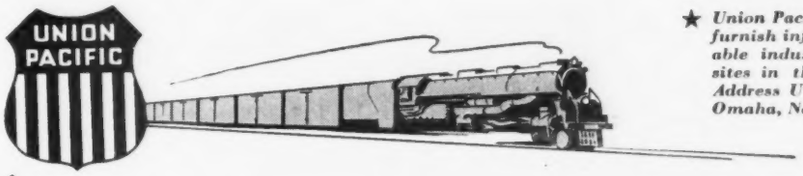
For example, in Idaho, Wyoming, Utah, and other wool-growing states in Union Pacific territory, there is a large source of supply for the textile industry. Union Pacific has the equipment and personnel to meet all the requirements of shippers in those regions. The railroad specializes in efficient service for the shipment of sheep and other livestock; also maintains a livestock department closely cooperating with livestock raisers.

These thirteen western states served by the railroad are ripe for postwar expansion. They have the materials, facilities and space.

Union Pacific will continue to play its part in the future progress of this western territory by providing unexcelled freight and passenger transportation over its Strategic Middle Route.

Be Specific— say "Union Pacific"

★ *Union Pacific will, upon request, furnish information about available industrial and mercantile sites in the territory it serves. Address Union Pacific Railroad, Omaha, Nebraska.*



The Progressive

UNION PACIFIC RAILROAD

The Strategic Middle Route

As nationally advertised in
Ladies' Home Journal

When you Buy
HANDKERCHIEFS
for yourself and for your family

Look for this label

SAYLERIZED * cotton handkerchiefs have a linen-like beauty and a lasting appearance of freshness that endure through repeated launderings. This process minimizes lint and fuzz.

SAYLERIZED * finish is also applied to many of the better types of fine cotton dress goods, and to curtain organdies, by Sayles Finishing Plants, Inc., Saylesville, Rhode Island.

SAYLERIZED * *patented finish makes good fabrics better*

*Reg. U. S. Pat. Off.

White and dyed by Sayles Bleacheries Division;
Prints by Glenlyon Print Works Division.

Which of these Packages, in your opinion, will Roll Faster to your customer?

FROM ACTUAL PHOTOGRAPHS, AT A DISTANCE OF 3 FEET

These are three commonly used methods of marking packages—stenciling, labeling and hand-marking—common carriers, such as the railroads, truckers and Railway Express, recommend stenciling.

Why take a chance—rain and damp weather obliterate type or hand written labels—avoid hand addressed mistakes—illegibility—labels coming off—lost shipments—delayed shipments.

Stencil address your shipments to keep your packages out of the carriers' Lost Shipment Warehouse.

Stenciled Shipments Roll Faster

THE WORLD'S OLDEST AND LARGEST MANUFACTURER OF STENCIL CUTTING MACHINES

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OVER 100 D-B ITEMS FOR THE SHIPPING ROOM

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April 8 to 13, 1946

TEXTILE HALL

GREENVILLE, SOUTH CAROLINA

Two hundred manufacturers of machinery and textile equipment have signed contracts, and will display standard and improved installations, machines, accessories, operating and office supplies, primary and fabricating materials, and parts.

Due to conditions brought about by the War, textile plants desire to make replacements and improve equipment. The representatives of their financial and operating personnel, who attend the Exposition, will see many things which are new and useful.

Committees of citizens have been appointed so that all who attend the Exposition will be able to obtain quarters. Please send applications to "Rooms Committee, Care of Textile Hall Corporation".

Note: This Exposition is for the textile industry. Due to the anticipated large attendance and crowded aisles, it is regretted that the public and children under sixteen years of age cannot be admitted.

(*Continued from page 220*)

third-shift employees, particularly during the war, as a possible explanation. One other factor may be the difficulty of fighting the fire during the third-shift.

From the standpoint of cost, the average loss per mill which operated 18 hours or less was $688; while the average loss per mill operating more than 18 hours per day was $1,569, or 227% of the amount for one- or two-shift operation.

Textile Men as Leaders

(*Continued from page 153*)

the textile industry has been handicapped by the necessity for using a variable raw material. Synthetic fibers on the other hand are controllable; and we can obtain them in just about the length, fineness, elasticity, stiffness, and uniformity which we want. Therefore, for the first time, we have an opportunity to dispense with the rule of thumb and become a scientific, precise, highly automatic industry. Furthermore, developments in other industries are coming to our aid, including control instruments, better metals and other materials, electronics, and new chemicals.

DEPRESSION. One of the major problems involving textile men with which the industry cannot cope all by itself is that of the business cycle. Financial panic and depression can destroy all the efforts of any individual industry to manage its own affairs. Yet a problem of this magnitude must be tackled by textile men as well as others. Indeed, I come back again to the point that those who lead a major industry must take a prominent part in solving a problem of such wide scope as this.

Eliminating the basic cause for depression is a matter of keeping purchasing power and productive capacity as closely in balance as possible. It also involves overcoming the fear psychology which develops when the two get slightly out of balance. All this may sound like an oversimplified statement of the problem, but basically little else is involved.

Some day, some of us—possibly self-educated in the manner I have suggested—are going to lick this depression problem. Perhaps we are going to do it by establishing some board of statisticians capable of continuously checking the balance between purchasing power and productive capacity. In some way—I hope through enlistment of the force of public opinion—we are going to so implement this board that suitable action will be taken regularly, based on its findings. True, we have a long way to go before we develop the proper statistical procedure and before we develop

(*Continued on page 227*)

This is the interior of the plant of Joseph Black & Sons Company, Inc., manufacturers of Bachelor's Friend Guaranteed Sox, of York, Pa., after it had been repainted according to the principles of COLOR DYNAMICS.

Color Dynamics . . .

The scientific use of color to lessen eye fatigue of textile workers . . . improve quality and quantity of production!

ALERT executives in the textile industry, as well as in many other fields, are now making Pittsburgh's COLOR DYNAMICS an important part of their maintenance program.

They have become increasingly aware that eye fatigue causes headaches, digestive upsets, "nerves", depression. These lead to loss of morale, lower production and repeated absence from work.

The science of COLOR DYNAMICS aids in correcting these conditions. It has often proved that it cuts down unnecessary eye travel, reduces tension and the need for continuous adjustment of vision.

You can test for yourself the practical value of COLOR DYNAMICS in your manufacturing plant. Apply its principles to one or two machines or one department. See the difference it makes in the efficiency and morale of your operators!

For a comprehensive explanation of this revolutionary new science, get a free copy of our book, *Color Dynamics*. You'll find this explanation of the use of color energy both stimulating and practical. Write Pittsburgh Plate Glass Company, Paint Division, Dept. TW 2, Pittsburgh 22, Pennsylvania.

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TEXTILE BANKING COMPANY

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Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

(*Continued from page 224*)

suitable implementation; but a broader and deeper education on social, economic, and political problems will pave the way.

On the matter of overcoming fear psychology, TEXTILE WORLD, as some of you know, has already proposed a plan based entirely on the well-established principles of insurance. The textile industry in the past, as I have attempted to point out on other occasions, has done some pioneering in insurance. It can pioneer again.

Ours is one of the greatest industries in the world, and it ought to lead in absorbing education and then lead again in the application of what it learns.

Short Circuit Control

(*Continued from page 155*)

quate devices are often installed without full realization of the risk that is being taken.

INADEQUATE DEVICE DANGEROUS. Here is why the use of inadequate short-circuit protective equipment is dangerous: When the short-circuit device fails, a condition equivalent to a short circuit occurs within the device itself. This condition releases a tremendous amount of uncontrolled energy within the housing of the device and may cause intense heat or a violent explosion. This explosion may cause parts to be hurled about with high velocity, and may cause much hot gas to be emitted and spread over an area of several feet or more. It is easy to see the danger where lint or oil is present.

In many old low-voltage systems (600 volts and below), inadequate oil-filled breakers are used. These breakers usually have a very low interrupting capacity rating; and when they attempt to open short-circuit currents beyond their rating, burning oil may be thrown over a considerable area, and a major fire may shut down the entire plant, destroy other equipment, and injure personnel.

The result of a failure of a short-circuit protective device is shown on page 155. Unfortunately, experience has shown that when a failure occurs, a mill hand is near the device.

Here is why inadequate devices are not economical: When the device fails, the condition is equivalent to a bus fault, and hence causes other parts of the mill to be shut down, with consequent loss of yarn or cloth production. For instance, if circuit breakers or fuses of adequate interrupting capacity had been used in the feeder to Dept. C (p. 155), the device would have safely opened the first short circuit on the cable to Dept. C, and other depart-

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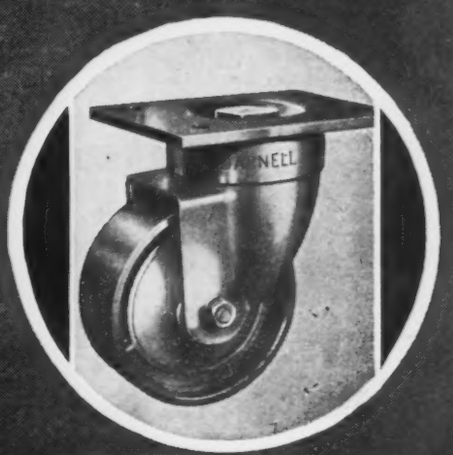

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You'll be hearing as much about the new DRUMMOND FLAKES now as about DRUMMOND SOAP in the past!

Drummond Flakes are ideal for the textile industry because they are so easy to use! And you couldn't get a flake that suds better! All this, and at the same time having the qualities of Drummond Soap: high body with low alkali content . . . leaves fabric perfectly clean with softest feel, brighter colors and whiter whites.

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If you have rats or mice, and want to be rid of them without the worry that the use of poison involves, send your order at once.

We have prepared a bait that contains red squill, a drug from the Mediterranean which is harmless to humans, cats, or dogs, but has the special qualities that mean *DEATH TO THESE RODENTS.*

Our R. C. Baits, baked in cookie form, are readily eaten by rats and mice, and have been used successfully with great satisfaction. All you do is scatter our R.C. Baits in infested areas.

No. B 1501— 100 baits—$4.00
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"It's worth the price because it does the work without danger to human life."

Your check, or purchase order, will assure you prompt delivery. We pay all shipping charges except on C.O.D. orders.

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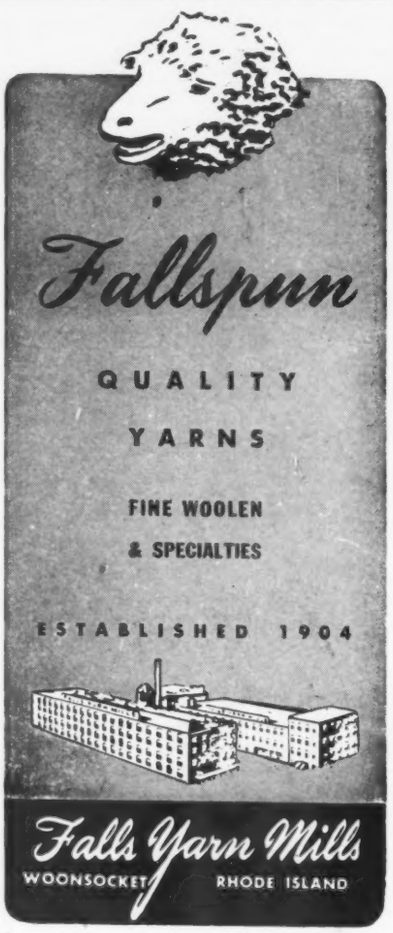


ments would not have been affected. However, inadequate interrupting capacity caused the short circuit to carry through to the main feeder, requiring the main circuit breaker to clear the fault.

The following actual case histories show the results of inadequate short-circuit protection.

CASE 1. In a New England textile plant a fault occurred on a motor circuit. The branch-circuit fuse (that is, the fuse in the circuit to the motor) which protected this circuit was inadequate, and consequently blew up. The main fuses between the source and branch-circuit fuse were too small, and failed. The main breaker was also of insufficient interrupting capacity, and it failed, too. The fault was finally cleared when the power company's circuit breaker tripped open. In this case, the loss of production of the entire plant was caused by a fault that could have been confined to one small motor circuit.

CASE 2. In a plant in the Middle West, one small circuit breaker of inadequate interrupting capacity failed. It spread carbon over the switchboard, thereby causing eight other breakers to fail within two weeks' time. Eventually, a new board with adequate circuit breakers was installed and no further difficulties were encountered. This plant not only lost production, but was obliged to buy two switchboards.

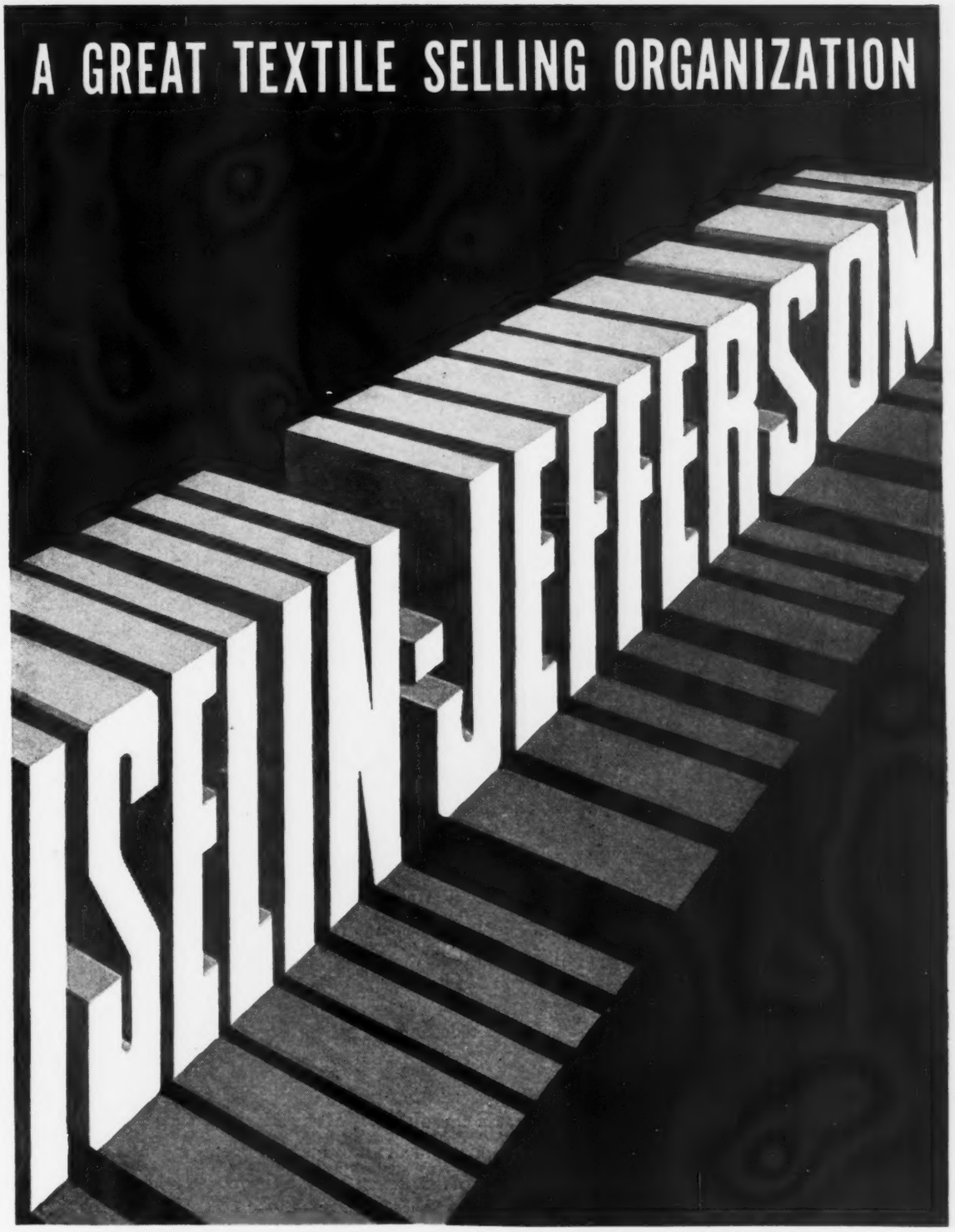
CASE 3. Circuit breakers of insufficient interrupting capacity were installed in a yarn mill in the South. The users had been warned that the breakers were too small. Within three years so many of them had failed on short-circuit currents that all of these original breakers had to be replaced with adequate ones.

CASE 4. A finishing plant was continually obliged to replace circuit breakers because they failed. The operators thought that these failures were a regular part of power-system maintenance. When the plant engineer was shown that the circuit breakers were too small, he bought breakers with higher interrupting capacity. Since then, there has been no circuit-breaker trouble.

ASSURE PROTECTION. There are certain steps which can be taken to insure adequate short-circuit protection in a plant distribution. These steps are:

1. Accurately determine the short-circuit currents available. In the last few years much has been learned as to how available short-circuit current can be accurately calculated at any point in a power system. Some former fallacious ideas, which lead to many instal-

(*Continued on page 232*)



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True, it will be a long time before the cotton textile industry catches up with demand. This does not necessarily mean smooth sailing ahead. Emphatically not.

All kinds of new fibres and blends are ready for release – not to mention new finishes and processes. The whole textile picture can change very quickly – all the way from mills to markets.

The operation of the industry is becoming increasingly complicated and difficult. More than ever is expected of selling organization alertness and resourcefulness – to meet the problems of the present and the challenge of the future.

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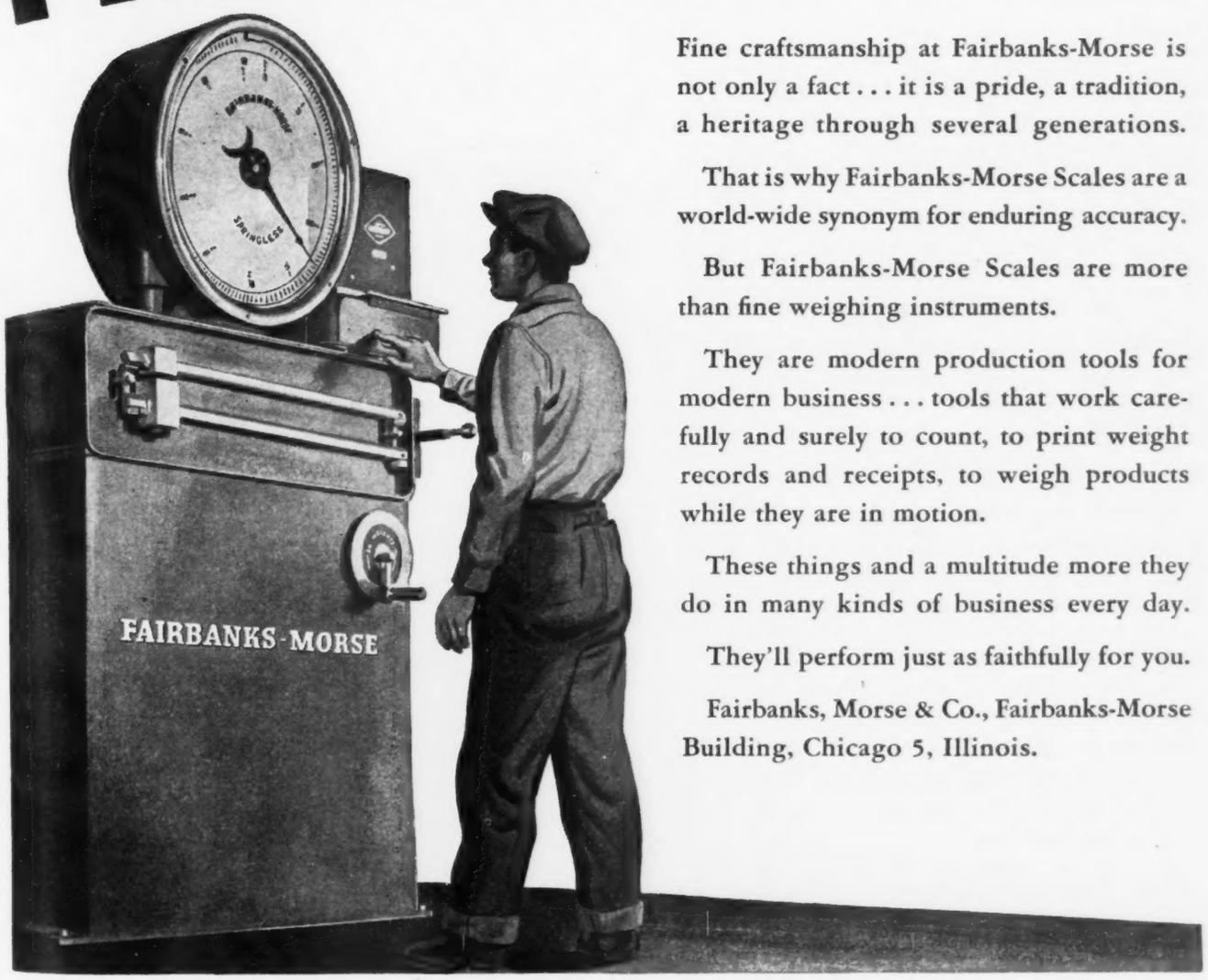

Fine craftsmanship at Fairbanks-Morse is not only a fact . . . it is a pride, a tradition, a heritage through several generations.

That is why Fairbanks-Morse Scales are a world-wide synonym for enduring accuracy.

But Fairbanks-Morse Scales are more than fine weighing instruments.

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These things and a multitude more they do in many kinds of business every day.

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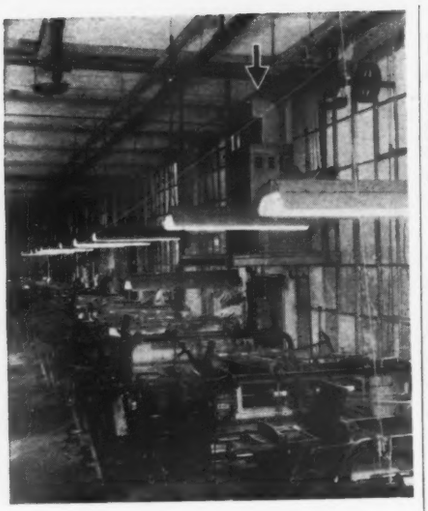

HOW TO GET NEEDED HUMIDITY AT LOW COST

Two small Air-Perme-Ators maintain 60% relative humidity in this 95,000 cubic foot weave shed.

No costly central system is needed. Air, drawn from outside is charged, by the principal of molecular suspension, with high humidity *inside* of the machine. No free moisture is released.

The Air-Perme-Ator is simple to install. No floor space is needed as conditioner can be suspended from the ceiling. Maintenance cost is nil.

The Air-Perme-Ator is used in warping, winding, carding, spinning, and weaving sheds; in knitting plants; and dye houses. It has proved its merits in scores of leading rayon, cotton, and woolen mills in the last ten years.

More and more mills are changing to the Air-Perme-Ator because of the economy and efficiency of this new system of "dry" humidification.

Write today for "Bulletin A T" describing the Air-Perme-Ator.

AIR-PERME-ATOR MFG. CO.

8 Stout St., Paterson 2, N. J.

(*Continued from page 228*)

lations of inadequate fuses and circuit breakers, have been dispelled. For example, the idea that only 20,000-amperes fault current could be obtained at 480 volts has been dispelled by actual measurements of currents of the order of 100,000 amperes at 480 volts.

If the textile-plant electrician cannot calculate these short-circuit currents, then his consulting engineer, or the utility company's engineer, or the application engineers of large electrical manufacturers can calculate them for him. Until the magnitude of short-circuit currents is known, it is not possible to be sure that the short-circuit protection is adequate.

2. Install only circuit breakers or fuses of known adequate interrupting-capacity rating. Devices of adequate rating can be obtained to meet the requirements of all industries.

Another factor to keep in mind is to prepare for load growth. If the system is installed with circuit breakers that are only large enough for present requirements, the circuit breakers will become too small, from an interrupting standpoint, when capacity is added. The system should be designed and the circuit breakers should be selected on a basis that will provide for expansion, without exceeding the circuit-breaker interrupting-capacity ratings. This expansion can be done at practically no added expense by employing a modern power distribution system, such as some outstanding textile plants now have.

Main and auxiliary switchboards in operation in hundreds of yarn and cloth mills today were installed years ago when the plants were small or less power was needed, such as for frames run at slow speeds with small packages. As the plants developed, more power was needed. New feeders were added to carry the new load, and new transformers were added to the bus to supply the added load. In most cases, no thought was given to the breakers, because they carried their load currents satisfactorily. However, when new transformers were added, the capacity of the power supply increased, and hence the available short-circuit current also increased. This higher short-circuit current would impose added interrupting duty on the old breakers, if they were required to clear a faulty feeder cable. Often this added short-circuit current was sufficient to bring the total short-circuit beyond the ability of those existing breakers. But, through oversight, nothing was done about it.

Failure to consider the effect of increased short-circuit currents has probably been the most common single cause of many of these older installations in textile plants being unsafe from a short-circuit protection standpoint.

Handicapped Veterans

(*Continued from page 135*)

might have been suffered by men on the field of battle are duplicated in the Smith mills. Although the 140 handicapped workers are probably unaware of it, they have served a patriotic purpose since the fact that they are able to do a day's work under difficulties has given the mill's medical department a fund of information that could never be duplicated in theory or from books.

FOREMAN-TRAINING COURSE. Returning veterans who show a special aptitude for leadership are enabled to take advantage of an intensive foreman-training course at Alexander Smith & Sons. One such employee who is currently "going through the mill" is ex-Technical Sergeant John P. Quinlan, who was tail gunner on the famous B-17 heavy bomber, "The Memphis Belle." Sergeant Quinlan subsequently was transferred to B-29s and had to bail out back of the Japanese lines in China, but managed to get to his lines safely after three months of hide-and-seek with the Nips.

Sergeant Quinlan's current training covers all phases of production from raw materials down the line to finished carpets and rugs. The course takes 40 weeks and includes periods of training in the following: time study, product engineering, wool department, carding and picking, spinning, dyeing and yarn storage, axminster and velvet design, axminster setting, axminster weave, frame and dressing, axminster finishing, velvet mill work, mechanical and power, experimental engineering, claims, accounting, statistics, order and shipping, warehouse, product control, credit, carpet contract, purchasing, personnel training and suggestion system, medical department, and finally a period devoted to the company's history, traditions, and labor relations.

Not only does the course serve as a fund of information for the prospective foreman but also it gives a chap like Sergeant Quinlan, who had been away from home for four years undergoing new and unusual experiences, a fresh perspective on his own future.

Alexander Smith & Sons feel that they have developed an intelligently planned and workable program for their veterans. The company's only regret is that it must necessarily limit its veterans' rehabilitation program to its own returned soldiers, sailors, and marines. At the end of the war, a total of 1595 Smith men and women had entered the armed forces. Thirty-seven will never return. The mills normally employ about 6,000 and are regarded as the largest single unit for the manufacture of pile floor-coverings in the world.

When a handful of "dust" bought a pound of bacon

During the Klondike gold rush, every trader had a scale to weigh the gold dust brought in by the prospector. No other currency was available.

Gold served its purpose then, but modern business had to adopt a more efficient medium of exchange.

Cumbersome financial practice, too, has been replaced by an easier, more efficient method—Factoring.

For the Factor removes from your shoulders the time-stealing disturbances of credit checking and worries about slow maturity of accounts receivable. In addition, capital is made more quickly available when needed.

If you are interested in this modern method of doing business, feel free to call on us. Your inquiry will receive prompt and full attention.

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There are two major factors in the speed which Gas brings to modern industrial and commercial operations. First there is the speed with which Gas comes on the job. It needs no gasification as do other fuels—Gas gives instant heat, swiftly reaching the temperature required by the setting at the control panel—and Gas maintains absolute fidelity to that setting.

Then there is the speed with which Gas imparts its inherent heat to the materials which must be processed or dried, for Gas utilizes the three basic principles of heat transfer—convection, radiation, conduction. Modern Gas research has developed equipment designed to transfer the heat of Gas at highest efficiency, with greater speed and depth of penetration.

You will benefit from the results of the research of the American Gas Association and Gas equipment manufacturers if you consult the Industrial Gas Engineer of your local Gas Company. He can help you secure faster, more efficient, more economical manufacture of improved products. You incur no obligation by consulting him.

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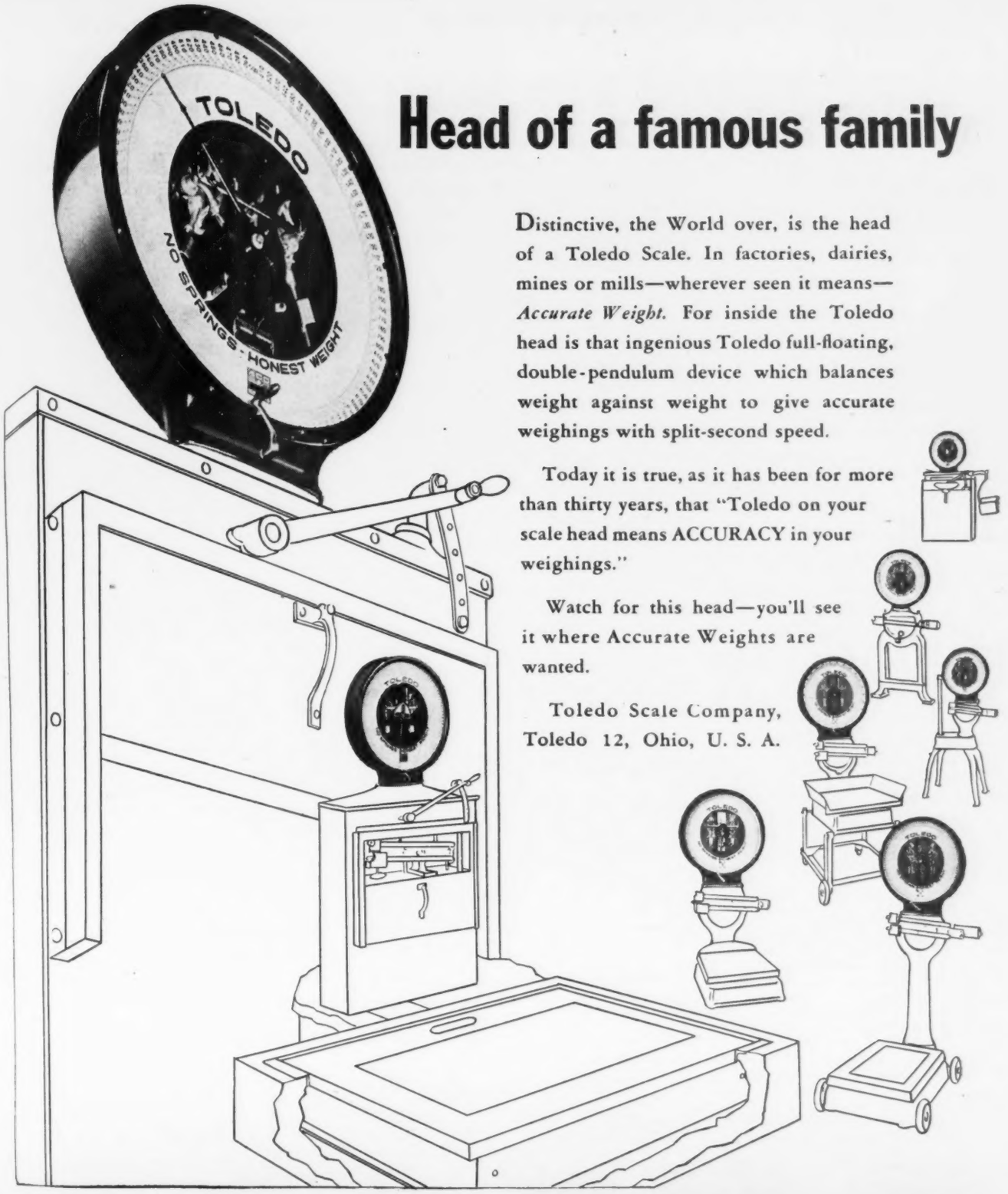

Head of a famous family

Distinctive, the World over, is the head of a Toledo Scale. In factories, dairies, mines or mills—wherever seen it means—*Accurate Weight.* For inside the Toledo head is that ingenious Toledo full-floating, double-pendulum device which balances weight against weight to give accurate weighings with split-second speed.

Today it is true, as it has been for more than thirty years, that "Toledo on your scale head means ACCURACY in your weighings."

Watch for this head—you'll see it where Accurate Weights are wanted.

Toledo Scale Company, Toledo 12, Ohio, U. S. A.

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Planning an Inter-Com System?

It will pay you to investigate Executone...

Employing the most advanced principles of electronics, EXECUTONE automatically gives you control of your entire organization through instant voice-to-voice contact. You lift no receiver, twirl no dial! You just press a button...and *talk!*

EXECUTONE frees your switchboard for important outgoing and incoming calls... eliminates the endless running back and forth from one office to another. The coupon below will bring you the whole story.

UNCONDITIONALLY GUARANTEED

Over 90,000 successful EXECUTONE installations, backed by our *unconditional guarantee* are your assurance of trouble-free performance and dependability. EXECUTONE Inter-Com Systems are individually engineered to your *particular requirements*... installed and serviced by factory-trained specialists in principal cities throughout the country.

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Two-station systems for as little as $50. Larger systems, with up to 100 stations, are available.

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415 Lexington Ave., New York 17, N. Y.
I am interested in data on EXECUTONE.
☐ Please send literature.
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Washington Bothered

(*Continued from page 106*)

event that runaway prices for cotton should become a threat to the stabilization program.

There is a tremendous political undertow, with the Senators from the cotton states discounting the possibility that a ceiling will be imposed.

UNRRA NEEDS. At this writing, no official program for UNRRA in 1946 has been announced. Estimates of requirements run about this way:

Raw Cotton—UNRRA hopes to import 150,000 to 160,000 metric tons into Europe and China, mostly China. This will be nearly all U. S. cotton and will aid our export picture.

Raw Wool—UNRRA wants to send 40,000 tons, clean-weight basis, into European UNRRA countries. Practically all will be U.K. and Dominion wool.

Cotton Piece Goods—UNRRA would like to import into UNRRA countries 80 million yards. About half is under contract from Brazil; the balance it is hoped will come from U. S. and U. K. From this country, and probably from England, the best possibility will be military surpluses available here and in the various theaters of operation.

Wool Piece Goods—UNRRA estimates 3,000,000 to 3,500,000 yd. U.K. and Australia will be the chief sources of supply. No new procurement is planned in U. S. Some is already under procurement here now as has been reported in domestic trade circles from time to time.

Spinning Room Reports

(*Continued from page 151*)

spent in personal leadership and supervision of more important phases of the department's operation.

The reports also indicate that the spinning room has followed the method of top management in designing a report. The same questions have been asked that top management would ask if it were to consider the installation of a new general-office report. These questions are what facts are necessary, and what is the simplest way to record them?

PRODUCTION RECORDS. It is not necessary to review such fundamental records as those relating to the pounds per spindle and the weekly spinning production. Some of the most interesting records, however, are those employed for controlling production in the spinning room.

One of these is shown in Fig. 1. It is used by several mills as a record of yarn numbers running in the spinning room and as a visual chart for planning production schedules or frame changes. The blocks represent frames; and by marking the number of frames desired to change, the superintendent or production manager can use this record as a change order to the spinning department. In addition, this record can be used by the overseer of spinning when he is called upon to report the number of frames on certain yarn numbers.

Other interesting records found in the spinning room have resulted from the usual difficulty encountered in keeping accurate production records of a

(*Continued on page 240*)

Daily Report of Attendance

Dept. Spinning Mill #2 Shift First Date 1-28-46

Name	Sick	Asked off	Sent out	Cause unknown
John L Doe	✓			
Mary Doe		✓		
Jack Doe				✓

Employees' Attendance Record

Name	Week ending 1-12-46						Week ending 1-19-46						Week ending 1-26-46						Week ending 2-2-46					
Doe John L.	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P
Doe Mary	A	P	P	P	P	P	P	A	A	A	P	P	P	P	P	P	A	P	P	P	P	A	P	P	A

Fig. 5. An unusual system of attendance records is used in one spinning room to control absenteeism. Form A, filled out by the second hand, lists the cause of an absence. Form B, a weekly report kept by the spinning-room clerk, makes use of a method of "scratching" the name of a chronic absentee.

The Case of The Golden Opportunity!

A True Story that took One Billion Dollars...and 90 years...to write!

At last his opportunity had come! A chance . . . *a golden chance* . . . to buy the mill!

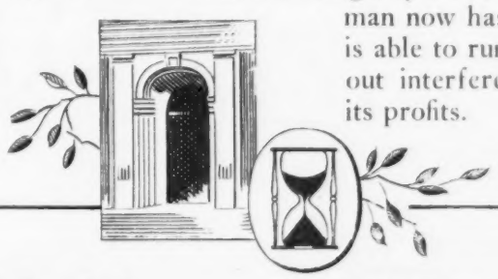
But to the ambitious Assistant Manager . . . staring out of the window of his small office . . . it was a chance that was slipping from his grasp —for his capital was much too small.

His mind turned back over his past. In his mind's eye, he saw a young man tending looms. A foot weary salesman writing reports in a second-rate hotel. Years of *slow, painful progress*—until finally, a pane of frosted glass, with his name proudly proclaiming him "Assistant Manager". And now, a chance at ownership—only . . . it would take four times the capital he had. Where could he turn?

* * *

Just a few weeks later, this man signed the papers that made him *sole* owner. He had seized the Golden Opportunity—because JAMES TALCOTT, INC. with characteristic liberality had advanced him the money he needed.

Because it is the policy of JAMES TALCOTT, INC. to *work out* a method of handling any reasonable deal, this man now has a rich future, is able to run the mill without interference and enjoy its profits.



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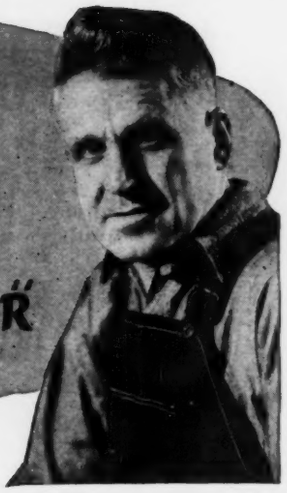

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Reg. U. S. Pat. Off.

SOCKET SET SCREWS WITH KNURLED POINT

. . . AND HERE ARE THE 3 FACTORS:

FIRST—Strength—unbelievably strong

SECOND—Accuracy and hardness.

THIRD—Self-Lockers—they won't shake loose!

Yes, the "Unbrako" Socket Set Screw with the Knurled Point is a *Self-Locker*, because the knurled points dig-in and hold firm. It's the Set Screw with a "third factor" because of those knurled points, and it can't be shaken loose by even the most stubborn vibration! Yet, it can easily be backed-out with a wrench and used again and again. Why run the risk of having set screws work loose and cause trouble, when you can prevent it by using "Unbrako" Self-Lockers?

Pat'd and Pats. Pend.

In sizes from #4 to 1½" in diameter; full range of lengths. For further information, write for the "Unbrako" Catalog of Socket Screw Products.

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Knurling of Socket Screws originated with "Unbrako" years ago.

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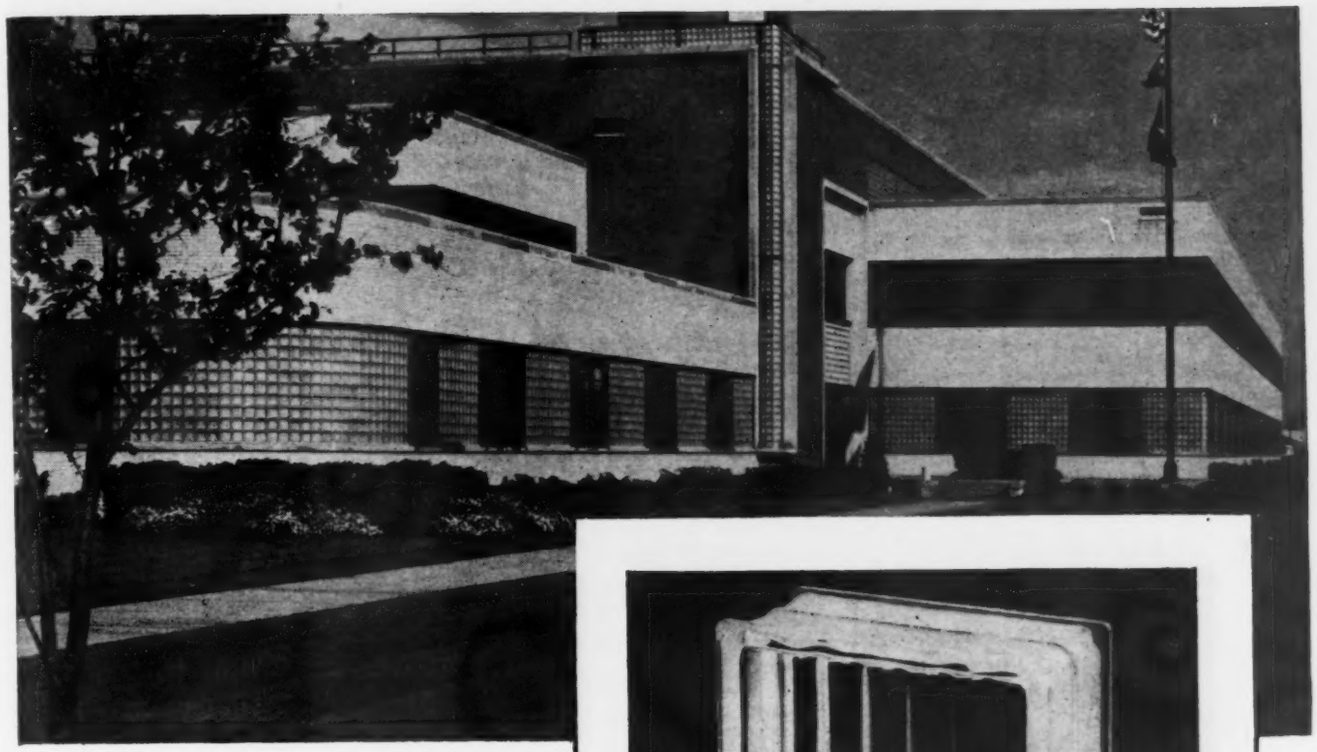

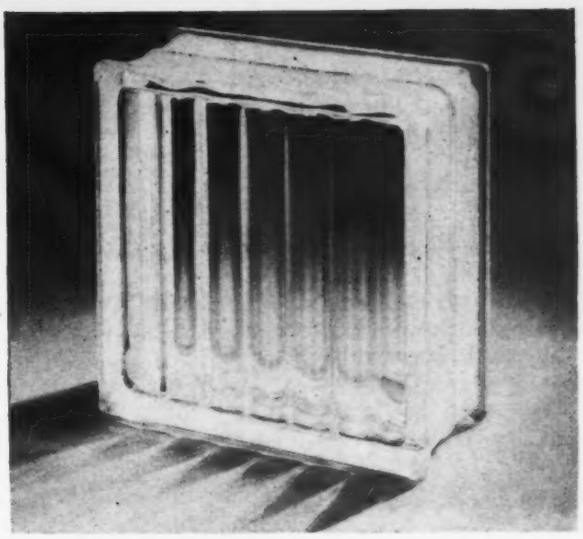

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• in office buildings and stores

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LIGHT—where you need it most. Protection—against dust infiltration and heat losses. Savings—in operating and maintenance costs. Those are three important reasons why PC Glass Blocks are in increasing demand for new construction and modernizing projects.

PC Glass Blocks transmit a generous supply of diffused natural light over wide areas, increasing usable floor space, reducing artificial lighting costs.

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PC Glass Blocks harmonize with a wide variety of plans, have proved efficient and economical in all sorts of buildings, all over the country. When you are planning a building or modernizing program, be sure you know *all* the advantages of glass block construction. We shall be glad to send you detailed information on patterns and sizes of PC Glass Blocks, Pittsburgh Corning Corporation, Room 313, 632 Duquesne Way, Pittsburgh 22, Pennsylvania.

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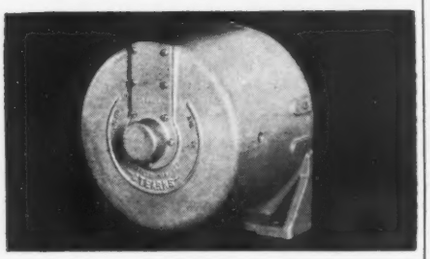

This brake will develop a torque of 575 lbs. ft. or the equivalent of 100 HP at approximately 1000 RPM. Shown is a floor mounted type.

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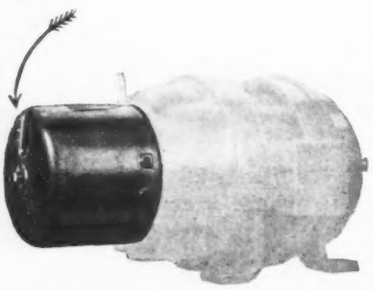
Brakes Stop HEAVY Loads

Up to 100 HP motor driven load, depending on speed, can be effectively retarded with Stearns Magnetic Disc Brakes.

If you have a problem involving one or a sequence of automatically controlled stops on motors or moving machinery, it will pay you to investigate Stearns Brakes. The cost is so little, and the usefulness so great, in a dollar and cents value.

Bring your braking problems to our Brake Division. Stearns Brakes are being used efficiently and satisfactorily in hundreds of exacting operations.

Put them to work for you!



The magnetic brake with the lining wear indicator and manual release —distinctive, original.

STEARNS MAGNETIC MFG. CO.

646 S. 28th St. Milwaukee 4, Wisc.

SEPARATORS - CLUTCHES - MAGNETS

(*Continued from page 236*)

variety of yarn orders. This difficulty is increased by the fact that hank records are theoretical productions; and while they are necessary, they should be supplemented by checks upon the yarn actually produced.

In the yarn mill which uses twisters, the usual point for checking is at the warpers. Here an inventory record of beams produced, such as shown in Fig. 2, may be employed. This record, which can be kept by the beam doffer, affords a complete, up-to-the-minute count of beams made for the various styles. The simplest way of using this report, however, is to count the beams at end of each shift. This count can be obtained quickly from the regular beam report and posted to beam-inventory record.

Weaving mills would not be particularly interested in an inventory of beams for the various orders unless some beams were converted to sets. As a record of sets can be obtained from the slasher room, the report shown in Fig. 2 is largely used only as a check of production by styles in the spinning room.

TECHNICAL RECORDS. Occasionally the overseer or second hand has to refer to the technical layout of an order or a yarn which has been completed. Many overseers preserve all layouts of yarn numbers. One method for recording them is shown in Fig. 3. This particular record is for spinning, spooling, and warping in a department which uses Barber-Colman equipment for the last two processes. Some overseers have the spinning-room clerk make out the records as new orders are received. By filing these reports in a binder, the clerk can render a very useful service to the second hands who have to refer to them. Complete data on stock, gears, draft, and twist are given; as well as details such as snick-plate settings, spinning stroke, and

Second Hand's Frame-Inspection Report

Mill No. 2 Frame 30 Date 1-28-46 Section #3

Overhauler Crew (Names) John Doe, James Doe

CREEL		RAILS		UNDER FRAME		ROLLS AND STANDS		HEAD OF FRAME	
Creel boards	Rough	Guides	2 needing resetting	Oil tubes	OK	Top clearers	Worn	Cylinder gear	OK
Shippers	Loose set screw	Ring rail	OK	Cylinder bearings	OK	Trumpets	OK	Oil tubes	OK
Skewers	OK	Rings	OK	Cylinder	OK	Roving traverse	OK	Gear studs and shafts	OK
Steps	OK	Lifting rods	Need new bushing	Idlers	Badly choked	Roving-traverse stroke	OK	Twist gears	Worn
Roving rods	OK	Lifting arms	OK	Builder	OK	Saddles	OK	Lay gear	OK
		Spindles	OK	Cam	OK	Stirrups	OK	Crown gear	OK
		Tapes	OK	Chain	OK	Levers	OK	Draft gear	OK
		Whorls	OK	Take-up gear	OK	Lever screws	OK	Pulley or sheave	OK
		Doffer guards	OK	Pitman roll	OK	Top rolls	Changed		
		Separators	One missing	Taper	Section man reset taper	Aprons	OK		
				Stroke	OK	Cradles	OK		
						Steel rolls	OK		
						Cap bars	OK		
						Cap-bar nebs	Several worn		
						Roll stands	OK		
						Roll settings	OK		
						Revolving clearer	OK		
						Scavenger roll	OK		
						Oil tubes	OK		

Frame lined and levelled OK

Suggestions: Sand and paint creel boards

List new parts needed
(3) Lifting rod bushings
Recondr top clearers
(1) Separator
(12) Cap bar nebs

(Any faulty parts should be reported on this form)

Fig. 4. The spinning-room second hand uses this report during his inspection of the overhauling done on a frame. Many mills also require the head overhauler to fill out a report in order to impress upon him the importance of doing a thorough job.

What is Your Main Top or Yarn Production Problem?

CHECK YOUR PROBLEM BELOW — LET NOPCO CP SOLUBLE HELP YOU SOLVE IT

PROBLEM		SOLUTION
Fiber breakage?	☐	Nopco CP Soluble minimizes fiber breakage because, being thoroughly and easily dispersed in emulsion, it assures uniform lubrication.
Fly or Waste?	☐	Nopco CP Soluble acts as a binder to prevent fly or waste in combing, drafting and spinning.
Excessive Soap Costs? Slow Scouring Time?	☐	Nopco CP Soluble materially reduces soap costs and virtually insures easy, complete scourability because it is 100% saponifiable—contains no mineral oil.
Polymerization?	☐	Nopco CP Soluble polymerizes in a slow, steady manner which is recognized as being of particular assistance in the drafting and spinning processes because it induces the correct amount of drag without excessive friction.
Rancidity?	☐	Nopco CP Soluble leaves no odor in the finished goods.
Cost?	☐	Nopco CP Soluble is economical—usually 1-3% oil on the fiber being sufficient for improved results.
Uneven Dyeing? Off-color Shades?	☐	Nopco CP Soluble permits level dyeing and brilliant clear-toned shades because residual oil content after scouring is usually well under 0.5%.

OTHER ADVANTAGES—Nopco CP Soluble imparts a drag equal to that of Olive Oil. It reduces static. It is highly resistant to oxidation. Safe for top, yarn or goods in gray storage and resin finishes for shrinkproofing. Write for more complete information.

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warper beam weights.

From the standpoint of machinery, one of the most useful records is shown in Fig. 4. This record provides the head overhauler or second hand with a list of the parts of the spinning frame which should be inspected after the overhauler has completed his work.

PERSONNEL RECORDS. The spinning room is frequently called upon for information on labor or personnel problems of various kinds. In fact, many mills handle only general matters of personnel policy through the personnel department and leave such problems as absenteeism and rehires to the overseer or superintendent.

An interesting method for checking absenteeism in the spinning room is shown in Fig. 5. Two reports, lettered *A* and *B* in the illustration, are used. When a worker is absent, his name is entered upon the daily attendance record *A*, kept by the second hand. These records are delivered to the general spinning-room office where the clerk posts all absences upon the weekly attendance record *B*. This record is pasted upon a board which hangs on the wall of the overseer's office and which shows the attendance of every employee for ten-week periods.

When an employee has been absent twice in one week or 15% of the days shown in the ten-week period, the spinning-room clerk automatically places a small piece of tape opposite the name of that employee. A worker so "scratched" must be interviewed by the overseer, or by someone designated by him. Such an interview could lead to a penalty or dismissal, if the attendance record is unusually bad and unexplained. In the case of a female operator, the absences allowed for the ten-week period is somewhat higher than 15%. The use of this system has resulted in a much lower rate of absenteeism in this particular spinning room.

Running Rayon on the Woolen System

(*Continued from page 149*)

four important points to keep in mind:

1. Close in both sides of the fancy from the nip between the doffer and cylinder to the shaft of the last worker.
2. A space of about 4 in. should be left between the bottom edge of the cover and the doffer to allow the air created by the fancy to circulate out of the bottom and into the top of this same 4-in. opening.
3. The cover should be, at its closest point, not less than 6 in. away from the surface of the fancy. This allows the air currents created by the fancy to spend themselves rather than compress the air with a close-fitting cover.
4. The cover should form an arc toward the last worker with a 1-in. opening between the top edge and the worker to permit the free circulation of air. When it is possible for the air to flow freely from under the cover, the danger is lessened of fly forming a roll on the doffer and of subsequent slubs in the roving.

These suggestions regarding variation of the roving will be helpful only if the feed going into the card is uniform. The feed must be uniform at all times and should be the first thing that is checked when uneven roving or variation in the roving across the card appears.

FEED. Another point of difference in the carding of rayon, as compared to wool, occurs in the feed hopper. The comb must be run more slowly in order to prevent the draft created by it from blowing the stock off the spike apron. Many times it is necessary to speed up the spike apron. Due to the lack of cohesion of some rayon staples, the stock will separate and carry over the apron lighter than would wool. But the increased speed of the spike apron takes care of the difference.

The lofty nature of the stock being dropped onto the feed table from the weighing pan makes it advisable to carry lighter weights on the scale, for if the stock being dropped on the feed table is too great in volume, it will overlap and cause an uneven feed. Increasing the speed of the feed rolls will make up this difference. By the time the rayon has been through the breaker card, it has lost some of its lofty nature and will lie flat on the finisher card feed table. A greater number of layers may then be placed there which makes for more even roving.

Ripples may frequently be present in the web being fed to the dividing rolls of the tape condenser, a condition caused by the lower fiber cohesion of rayon as compared with wool. By raising the pitch or arc of the doffer comb, running the comb at a lower speed, and allowing the web to sag slightly rather than drafting it straight across from the doffer will nearly always eliminate these ripples.

ROVING FOR FINE YARNS. It was found to be impractical and virtually impossible to spin a yarn finer than 3 run when using 100% rayon. When attempts were made to fill the card spools more than half, the roving became flat and soft and developed weak spots at which it fell apart when coming off the spools

(*Continued on page 246*)

Commonplace Essentials loom large among materials on which many modern advances in chemical synthesis depend. Caustic soda, one of the most familiar faces in the chemical family, is typical. For "NaOH" serves in the processing of rayon yarns for fine fabrics, soaps, refined petroleum and vegetable oils, paper making, and in rubber reclamation. Thorough knowledge of such widely used "Commonplace Essentials"... is combined with Niagara's recognized preeminent standards of manufacture to provide users with the dependable source of supply they need.

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The Element of Quality Is In Every Hooker Chemical

THERE'S a plus value for you in every Hooker Chemical. This is mighty important to you who are trying to maintain or improve quality of your product. That value is *dependable, uniform quality*. You can be sure that every shipment of Hooker Chemicals will be of the same high purity that meets your requirements. Uniform chemical supplies preclude the necessity of making costly adjustments in your process.

Listed below are some of the Hooker chemicals that are helping dye and textile chemists maintain uninterrupted production. Technical data sheets giving chemical and physical properties and analyses are available when requested on your letterhead.

Our Technical Staff is also ready to assist you in evaluating Hooker chemicals for your particular purposes.

Product (Chemical Formula Molecular Weight)	*Hooker Specifications*	*Suggested Uses*
Benzoyl Chloride C_6H_5COCl; 140.5	Freezing Point.....–0.9°C Min.	Manufacture of benzophenone, benzyl benzoates, synthetic perfumes, dyes and pharmaceuticals. In Friedel-Crafts reactions.
Benzyl Chloride (Omegachlortoluene) $C_6H_5CH_2Cl$; 126.5	Boiling Range 5° including .....179.4°C	Manufacture of ethyl benzyl aniline, dyestuffs, intermediates.
Cyclohexanol (Hexahydrophenol) $C_6H_{11}OH$; 100.1	Cyclohexanol (High Grade) ..98% Min. Distillation Range.....100% 4° C Max.	Solvent for dyes. Chemical intermediate.
Metanitrobenzoyl Chloride $NO_2C_6H_4COCl$; 185.5	Last crystal point.....28 to 31°C	Manufacture of dyes.
Orthodichlorbenzene $C_6H_4Cl_2$; 147	Freezing Point.....–10 to –22°C Boiling Range 6° including.....179°C	Manufacture of pyrocatechin, dye intermediate, other synthetic organic chemicals. Degreasing wool.
Paranitrobenzoyl Chloride $NO_2C_6H_4COCl$; 185.5	Minimum Purity.....95% Melting Point..... 70°C Min.	Manufacture of dyes.
Sodium Sulfhydrate NaSH; 56.1	NaSH .....70 to 72% Na_2S.....1 to 2% NaOH.....0% NaCl.....1% Max. Na_2SO_3, NaHCO .....1% Max. Fe.....5 ppm Max. Cu, Ni, Cr, Mn, Pb .....1 ppm Max. Water of crystallization.....28 to 26%	Desulfurizing rayon; calico printing; in sulfur dye baths.
Sodium Sulfide Na_2S; 78.1	Na_2S.....60 to 62% NaCl.....1.5% Max. Other Na Salts.....2.0% Max. Fe.....10 to 15 ppm Cu, Ni, Cr, Mn, Pb .....1 ppm Max. Water of crystallization ....36.5 to 34%	Desulfurizing rayon; calico printing; in sulfur dye baths.
Sodium Tetrasulfide (Solution) Na_2S_4; 174.23	Na_2S_4.....40% Min. Other Sodium Salts.....1.0% Max.	Manufacture of sulfur dyes.

HOOKER ELECTROCHEMICAL COMPANY

4 Forty-seventh St. Niagara Falls, New York

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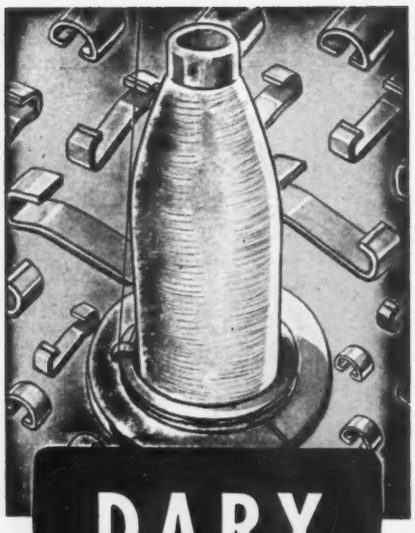

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Most likely to give maximum wear.

Most likely to stand up better under today's high draft spinning and twisting.

Most likely to make even more new friends in 1946.

Supported by more than 45 years of outstanding performance, these are only a few of many reasons for switching to Dary Ring Travelers NOW—ask to see your nearest Dary representatives.

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SYMBOL OF SUPERIORITY

The DARY RING TRAVELER CO.

TAUNTON, MASSACHUSETTS

JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.

JOHN H. O'NEIL, BOX 720, ATLANTA, GA.

H. REID LOCKMAN, BOX 515, SPARTANBURG, S. C.

(*Continued from page 242*)

during the spinning operation. This soft, weak condition of the roving also caused uneven drafting and finally uneven yarn, even when maximum rub was being put into the roving.

Weeks of research and much thought were put on the subject before the possibility of the weight of the spools as the cause for the trouble was realized. The regular spools then in use on a card 48-in. wide weighed 7½ lb. Spools weighing only 2¾ lb. were made by our machine shop using a light-weight material in place of the usual wood. With the heavy spools on the card, the roving acted much like a flat tire—slipping around the spool and becoming loose and soft. The longer it ran the worse this condition became, hence the doffing of the spool before it was half full. These same spools had to be run on the spinning frame where they underwent the same action as that observed on the card, which served to double our trouble. Here again it was noted that the condition became increasingly worse the longer the spool was run, causing more ends to fall apart between the drum and the back roll. The light-weight spool made possible the spinning of yarns finer than can be spun with the finest 100% wool. It allowed us to make full card spools and to use staple as short as 1 $\frac{9}{16}$ in. It made possible a 50% increase in carding production with improved yarn and greater spinning production. This was by far one of the greatest improvements made in running 100% rayon on the woolen system.

Listed in Tables IV, V, and VI are specifications we have found satisfactory for a 3-card set for complicated fiber blends, multi-colored rayon blends, or stocks requiring a great degree of carding. Should straight rayon staple, or blends that require a minimum amount of carding be used, the intermediate card can be eliminated. Naturally, if coarser fibers are used, changes in clothing specifications should be made to compensate.

When deniers finer than 5.5 are used, the speed of the workers should be increased by one-third. This will insure better carding by eliminating the possibility of overcrowding the points of the workers which would cause the stock to roll and form pills, which in turn would cause breakdown in the staple and the formation of neps. When heavier deniers than 5.5 are used, both doffer and worker speeds are increased from 10 to 20%. This can be done as coarse staple does not require as much carding. Therefore, it is possible to carry a greater amount of stock in the card.

TABLE VI—DETAILS OF WOOLEN FINISHER CARD

	Dia., Inches	Circum. on Wire	Wire Number	Foundation	Typical Operating Set-Up		
					Gage	R. P. M.	Inches per min.
Feed Rolls	2 5/8	9.42	Metallic	5-thread, No. 526U11	28	2.75	25.91
Licker-in	4-1/2	16.10	15/24s	Leather	30	230	370.30
Back Fancy	3	15.70	28s	Leather	28	410	643.70
Tumbler	9-1/16	31.43	32s	5-ply Rubber Face	30	160	5028.80
Cylinder	60	190.19	35s	Flexifort	..	71	13503.49
1st Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
1st Worker	7	24.74	35s	Flexifort	30	6.50	160.81
2nd Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
2nd Worker	7	24.74	35s	Flexifort	30	6.25	154.63
3rd Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
3rd Worker	7	24.74	35s	Flexifort	30	6.125	151.53
4th Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
4th Worker	7	24.74	35s	Flexifort	30	6	148.44
5th Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
5th Worker	7	24.74	35s	Flexifort	30	5.875	145.35
6th Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
6th Worker	7	24.74	35s	Flexifort	30	5.75	142.26
7th Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
7th Worker	7	24.74	35s	Flexifort	30	5.625	139.16
8th Stripper	2-3/4	11.38	35s	Flexifort	30	420	4779.60
8th Worker	7	24.74	35s	Flexifort	30	6.25	154.63
Fancy Stripper	1-7/8	9.03	30s	6-ply Cotton	28	590	5327.70
Fancy	9-3/4	38.48	33s	Low bend leather 3R., 3T., 5N	..	490	18855.20
Fancy Stripper	2-15/16	12.38	30s	6-ply Cotton	26	590	7304.20
Doffer	36	115.82	35s	Flexifort	30	5.75	665.97
Dickey	3-3/8	13.74	30s	6-ply Cotton	34	5	68.70
Doffer Comb	.....	.....	.....	.....	30	1360	.....
TAPE CONDENSER							
Dividing Rolls	6.50	20.42	.....	.....	28	30	612.60
Aprons	.....	27.25	.....	.....	24	32.33	780.00
Eccentric	.....	.....	.....	.....	..	290	.....
Spool Drum	6.50	20.42	.....	.....	..	38	780.00

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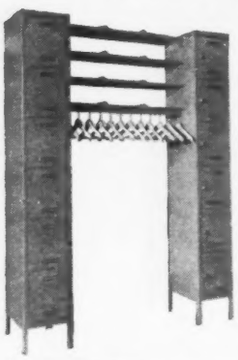

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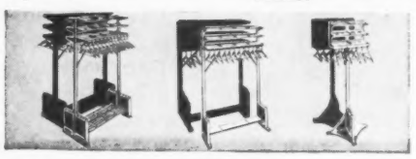

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"The Coat Rack People"

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It's as simple as that—you can start now to put your postwar plans into effect. Technological advancement of our postwar machines has been revolutionary. Increased production, superior throwing and reduced up-keep because of new materials of construction and ultra engineering design. Act now. *Consider these Products.*

U. S. ACME TWISTERS for spool or headless package

U. S. JUMBO FACE DRIVE TWISTERS for large headless package work

U. S. ACME DOUBLER TWISTERS, large package

U. S. REDRAWS and SPOILERS

U. S. TEXTILE MACHINE CO.

SCRANTON 9, PENNSYLVANIA, U. S. A.

News of the month

Finds OPA a Deterrent. Delays in price adjustments to meet higher costs of the cotton-textile branch of the industry, together with the stubbornly-held principle of cost absorption maintained by OPA, have been continuing deterrents to overtime operations and the maintenance of extra shifts in the mills, W. Ray Bell, president of The Association of Cotton Textile Merchants of New York, stated at the Association's annual business meeting held Jan. 29 in New York. At the meeting, four new directors were elected for three-year terms: John C. Hughes, of McCampbell & Co., Inc.; Richard Pohlers, of Rosemary Sales; H. D. Ruhm, of Bates Fabrics, Inc.; and John P. Stockton, of Stockton Co.

Price Relief Mill-by-Mill. OPA will consider price relief for fine goods mills as a group, but for coarse and medium-goods mills, where the mill is only a small part of a larger group, applications for price relief will be handled on an individual-hardship basis. Mills which have given an increase in wages must file with the National Wage Stabilization Board for approval, because price relief presumably will not be considered by OPA until such requests have been approved.

U. S. 1945 Rayon Output. Domestic production of rayon totalled 792,100,000 lb. in 1945, exceeding the 1944 output of 723,900,00 lb. by 10%, states Rayon Organon. Viscose- and cuprammonium-rayon filament-yarn production in 1945 at 448,800,000 lb. represented an increase of 17% over 1944, while acetate-rayon-yarn output at 174,900,000 lb. was an increase of 2% over 1944. Rayon staple-fiber production in 1945 amounted to 168,400,000 lb., a slight decline from the 1944 level. Viscose staple-fiber accounted for 75% of the total; acetate staple for the remaining 25%.

Outerwear Men to Meet. National Knitted Outerwear Association will hold its annual meeting at Hotel Astor, New York, Mar. 21. Leo Cherne, executive secretary of the Research Institute of America, will speak at the luncheon. The roster of speakers at the business sessions includes Arthur Besse, president of the National Association of Wool Manufacturers; Paul B. Halstead, secretary-treasurer of the Cotton-Textile Institute; and Stanley B. Hunt, of Textile Economics Bureau.

Finds Cotton Adequate for 6.00-16 Tires. Government tests to determine the comparative merits of standard cotton, "Wilds" variety cotton, and rayon tire-

Cotton Program Taking Shape

A REAL COTTON PROGRAM is shaping up in the Department of Agriculture, according to the statements of Secretary Clinton P. Anderson before the Association of Cotton Texile Merchants at the well-attended Victory meeting of that body in New York, Feb. 1. He said "Cotton can compete—but only if the entire industry cooperates all along the line. . . . The objective for producers, manufacturers, and retailers is a common one—bigger markets for cotton."

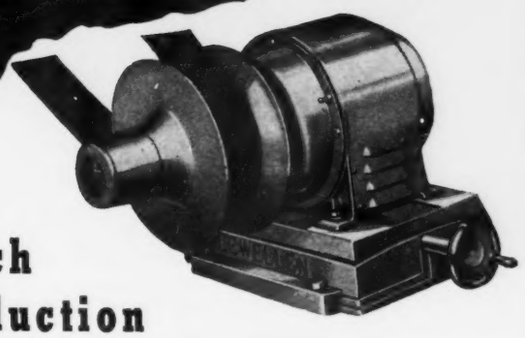
He indicated that his department had a census of cotton research projects in process, and that he would use his facilities to mobilize that research to advance cotton all along the line. He pointed out that if the mill man thinks cotton's problems can be solved in the market place, he is deluding himself; and that if a farmer thinks a floor under prices is the answer, he is in for a rude awakening.

Secretary Anderson discussed recent changes in cotton varieties and in farm methods. He considered the competition situation; and finally he pointed out the explosive possibilities of the carryover which is three times normal, much of it short staple and low grade, and some of it over ten years old. He indicated that government agencies were planning to restock the defeated countries with some of this cotton. It was said that the plan particularly points to Japan, with finished cotton products taken in return payment.

John M. Hancock, a partner in Lehman Bros., New York, spoke before the cotton-textile merchants on current trends, pointing out that the national planners spent six years at heavy expense trying to create inflation while all their acts were deflationary, and now their successors are trying to stop inflation and their moves seem rather to foster inflation. "Could it be that politics in a democracy and economics don't mix?" he asked. "A free market in general, is the only device that tackles the supply problem from both ends by limiting consumption and at the same time increasing production."

Hugh M. Comer, president of Avondale Mills, spoke on the dangerous situation facing cotton and said that all interests were seriously upset over what was happening in government cirles in respect to inflation. He indicated his belief that mechanization of raw cotton production was bound to take place. "The man who hoes cotton today with his hands," he said, "cannot earn enough money to buy a pair of overalls." However, he closed with the admonition, "Don't sell cotton short."

Add a Lewellen *Variable-Speed* Motor Pulley to your fixed-speed machine



and watch production

MOUNT!

1 **SPEED ADJUSTABILITY.** Regulate the speed of your machines by the simple turn of a Lewellen handwheel *without stopping the machine.* Have the *right speed at the right time!*

2 **MAXIMUM MACHINE OUTPUT.** Check the rated capacities of your machines with actual production output. Often what a machine can do is simply a matter of its operation at the correct speed.

3 **PRODUCT UNIFORMITY.** Actually the lack of uniformity in materials and varying conditions in plants demand speed adjustability of production machines for uniform, quality work.

4 **UNINTERRUPTED SERVICE.** Avoid the waste of time to change belts and gears. Keep production flowing smoothly.

5 **MINIMUM SPOILAGE.** Adjust machine speeds to equal the skill of operators—change in materials, and costly rejects are reduced to a minimum.

6 **FACTORY SPACE SAVED.** Lewellen Variable Speed Motor Pulleys are compact—modern in design. Often valuable space is saved by their use.

Back of each Lewellen Variable-Speed Motor Pulley is more than 45 years experience in speed-control engineering. Wire, phone or write today for complete information. We want to help you!

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Variable Speed { TRANSMISSIONS / MOTOR PULLEYS

★ Lewellen knows speed control

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IN BETTER PLANTS EVERYWHERE

Package Dyeing Installation, Extracting and Drying in a complete cycle on the same material carrier

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Cotton & Wool Dyeing Machines

Stainless Steel Construction

FOR

BEAMS • CHEESES • PACKAGES
CONES • RAWSTOCK • SKEINS

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CENTRIFUGAL EXTRACTORS AND DRIERS

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CENTRIFUGAL PUMPS

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RAYON CAKE DYEING MACHINES

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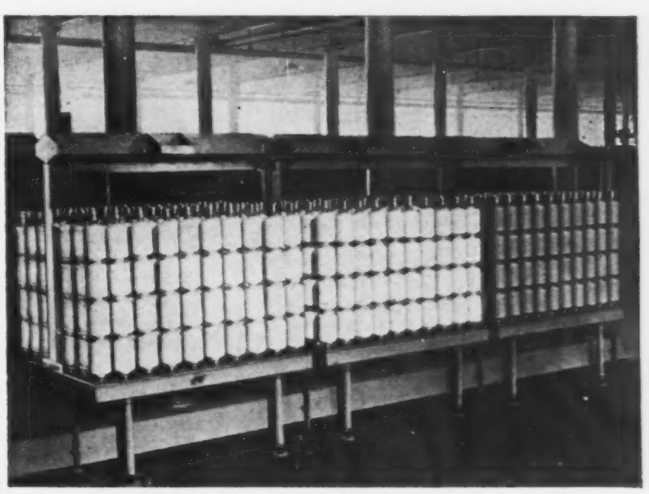
DYE SPINDLES AND PERFORATED TUBES



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Use in trough

Keeps Needles, Sinkers, and Machines Clean

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Textile Machinery

Designed by Engineers

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Manufacturers of:

- Replacement Parts for all types of Warping Equipment, including Combs as formerly made by a Warping Machine Manufacturer in Lowell.
- Cotton and Rayon Beam Warpers
- Ball Warping Machines
- Narrow Fabric Warpers
- Intermediate Dresser Stand for Woolen and Worsted Warp Yarns
- Electric Stop Motions for Silk Warpers
- All types of Expansion, Warper, Beamer and Slasher Combs
- Expansion Neck Reeds

cords are described in detail in a 100-page report prepared by the Rubber Reserve Co. and released to the Office of the Publication Board, Washington, D. C., for distribution. The results of the tests, as summarized, follow: (1) Standard cotton cord is entirely adequate for 6.00-16 (4-ply) passenger-car tire service. No failures resulted from cord weaknesses at mileages up to 68,000 miles. (2) In 7.00-20 (10-ply) S-4 (synthetic rubber) tires in front wheel service, "Wilds" cotton tires showed a 30% mileage superiority over standard cotton, but rayon showed a 70% superiority. (3) In 7.00-20 (10-ply) S-4 tires in rear wheel service, "Wilds" cotton tires showed a 202% superiority for mileage over standard cotton; rayon-cord tires showed a 517% improvement over the standard cotton tires. (4) Cotton tires show a slightly better treadwear rating than rayon tires.

N. Z. Government to Finance Textiles. New Zealand Government will establish a corporation consisting of representatives of the government, growers, workers, and manufacturers to run a small textile industry so as to be able to supply the needs of the country. Scheme is being financed by the government. The country will retain seven of 17 flax plants set up during the war. These will spin coarse and fine yarns.

Takes Initiative for Cotton. An aggressive program aimed at the expansion of present cotton markets and the creation of new ones was adopted by the 250 delegates of the National Cotton Council at the closing session of their eighth annual meeting at Memphis, Tenn., Jan. 24. The program puts cotton completely on the offensive in the fields of research, sales promotion, foreign trade, and production and marketing. "The time has come when we must take the initiative," Oscar Johnston of Scott, Miss., reelected council president, told the delegates.

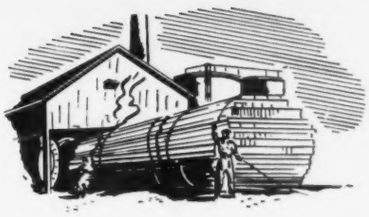
Finishers Elect. William Berry, vice president of Ware Shoals Mfg. Co., Ware Shoals, S. C., was elected president of the National Association of Finishers of Textile Fabrics at the annual meeting in New York, Jan. 23. R. W. Arrington, president of Union Bleachery, Greenville, S. C., retiring president of the association, was elected chairman of the board. The annual report of the secretary indicated that total yardage finished as reported to the association in 1945 showed a decrease of 4% from the amount reported by the same companies in 1944. A further decline in roller printing machines took place in 1945 when 305 were in operation as compared with 492 in 1934.

Philadelphia Textile Commencement. The pressing need for technological advancement as a means for meeting the problems of the textile industry was stressed by Dr. H. E. Michl, economist of the Cotton-Textile Institute, in his address at the midwinter commencement exercises of the Philadelphia Textile Institute, Jan. 31. He indicated how the industry had met and solved its problems of the past and paid tribute to the Philadelphia Textile Institute for its pioneering work and contribu-

(*Continued on page 254*)

German methods of dyeing, finishing, bleaching, printing, and synthetic-yarn weaving were investigated by the textile mission shown above with Col. Kennedy. This mission spent three months in Germany, returning the latter part of January, and held a reunion in New York the middle of this month. Left to right: Glenn D. Jackson, U. S. Finishing Co.; Henry D. Grimes, American Woolen Co.; Elliot Broadbent, Glenlyon Print Works; Lt. Col. S. J. Kennedy, Chief of Textile Branch, Research & Development Branch, Office of Quartermaster General; C. Norris Rabold, Union Bleachery and a consulting editor of TEXTILE WORLD; E. C. Geier, Duplan Corp., and Thomas R. Smith, Wicassett Mills Co.

PRESSURE IS PROTECTIVE **TREATMENT**



For most effective wood preservation, the chemicals must be forced *deep* into the wood. American Lumber & Treating Company obtain this deep penetration by the vacuum-pressure method in closed steel cylinders. Dipping, brushing on, or other makeshift methods can't begin to give comparable results. So, when you buy treated lumber, remember to say "pressure-treated"... it's best!

Whatever your needs —

AMERICAN LUMBER GIVES YOU ALL 3

1. Wolmanized Lumber* — protects against decay and termite attack.
2. Minalith — fire-retardant.
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in the application of
INFRA-RED RADIANT HEAT
IN THE
Textile Industry

CARBOMATIC INFRA-RED
GAS OR ELECTRIC UNITS

- Drying
- Curing
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- GREATER SPEED
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Our Engineering Department will gladly show you how Carbomatic will improve your production without any obligation.

All equipment guaranteed and in conformity with insurance companies' requirements.

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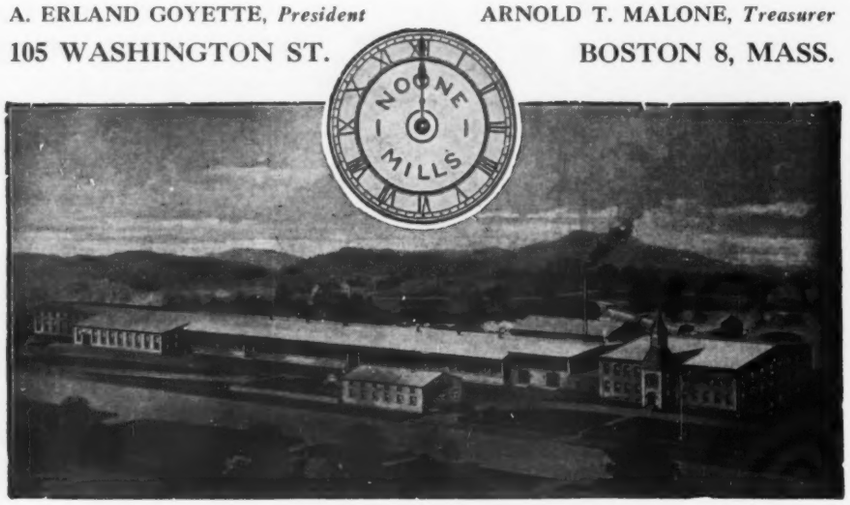

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Noone's Standard Slasher Cloths

Ask for **NOONE'S SLASHER CLOTHS** by name or style number.

Long experience in manufacturing Slasher Cloths and continuous experimenting have enabled us to produce several types of Slasher Cloth, each especially constructed to give best results on the particular kind of yarn to be sized.

The proper Slasher Cloth for each type of yarn means properly sized warps, less loom stops, easier weaving, more and better production, *and lower cost. We* can supply you the right cloth for your particular work.

On request we will have our representative call and discuss Slasher Cloths with you.

We are the oldest manufacturers of Slasher Cloth in America. Our experience enables us to build a Slasher Cloth that will meet your most particular demand. Use **NOONE'S SLASHER CLOTHS** and be convinced.

Sole Agents for

The Joseph Noone's Sons Company

PETERBOROUGH - - - - - - - - - - NEW HAMPSHIRE

Use Noone's Roller Cloths, Noone's Slasher Cloths, Noone's Clearer Cloths.

MY UPPER FLOORS

can be used—now that they've installed

SELF BALANCING

FLETCHER

WHIRLWIND

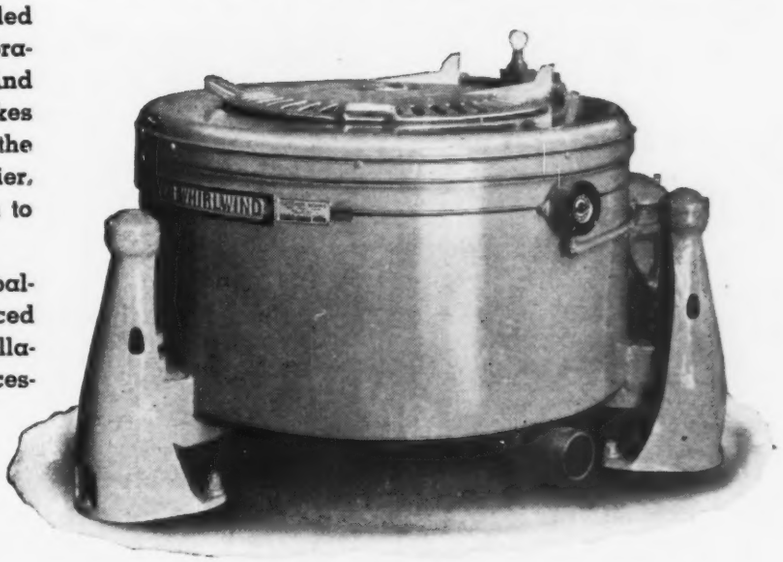
EXTRACTORS

Why? Because Fletcher has mastered that problem! Perfectly balanced, smoothly operating . . . Fletcher Extractors can be installed on upper floors without fear of heavy vibration weakening the building foundations. And because of the elimination of vibration makes possible multi-floor installations, there is the added advantage of using gravity for easier, faster, transfer of loads from one operation to another.

The Fletcher "long-swing" method of self-balancing absorbs all vibration due to unbalanced loads. Adjustable springs keep the oscillation in a horizontal plane and prevent excessive "dancing."

Don't let vibration get you down . . . *say Fletcher.*

Fletcher engineering consultation upon request.



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The name that means leadership in

CHEMICAL SPECIALTIES

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"Always Reliable"

LEATEX CHEMICAL COMPANY
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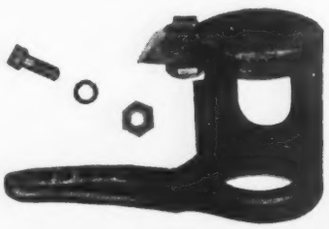

Re-condition your TRAVERS LEVERS

Worn and damaged Travers levers can be reconditioned with our special hardened lug bolt. Save the casting and the cost of new travers levers. After this reconditioning a new lug bolt inserted by your own mechanic as required will be all that's necessary for efficient operation.

Wayne Manufacturing Co.
Honesdale, Pa.
Manufacturers of Textile Mill Supplies

tions to the textile industry's progress. Dean Richard S. Cox gave the address of welcome. Six students were awarded B.S. degrees.

News Briefs. The War Assets Corp. announced on Jan. 24 that it would sell the 3,308-bale surplus of government-owned raw silk by sealed bids closing Feb. 14, 50% to weavers and 50% to knitters....The New Orleans Cotton Exchange celebrated its 75th anniversary on Jan. 18 when 750 members and guests sat down to a banquet which climaxed the event....California interests are planning a large textile exposition in the Pan-Pacific Auditorium, Los Angeles, from Aug. 24 to Sept. 2. ...Merrimac Mills, Methuen, Mass., celebrated their 50th anniversary in December. Founded by Henry Gaunt, the business has been carried on by his son, Alfred C. Gaunt, as president. Abbot Gaunt, a grandson, is at present general manager....The Rayon & Silk Manufacturers Association has been formed in Canada with offices in University Tower, Montreal. J. L. Hodges of British American Silk Mills, Ltd., Granby, is president....The Felt Association held its annual meeting last month and reelected as its president L. H. Hansel, president of The Felters Co., Boston. J. T. Lawless, president of the American Felt Co., Glenville, Conn., was elected vice president, and W. J. Parker, New York, secretary-treasurer....The first quarterly meeting of the Shenandoah Valley Textile Executives Association for 1946 was held Feb. 9 at the Shenandoah Hotel in Martinsburg, W. Va. John H. Fisher, of Virginia Woolen Co., is president. ...The Cotton Manufacturers Association of Georgia last month moved from its location in Room 940, Citizens & Southern National Bank Building, Atlanta, to new offices in Rooms 740-50. in the same building.

Viewing formerly invisible objects on Georgia Tech's new electron miscroscope are Dr. Gerald A. Rosselot, standing at the right, director of the State Engineering Experiment Station, B. H. Weil, head of the station's Technical Information Division, and R. W. Koza, seated, faculty research associate who is in charge of the instrument and its use.

Representatives of the cotton manufacturers who attended the eighth annual convention of the National Cotton Council held in Memphis, Tenn., Jan. 22 to 24. Left to right, front row; Ernest Rees, Fayetteville, Tenn.; Fred W. Symmes, Union-Buffalo Mills, Greenville, S. C.; Hugh M. Comer, president, Avondale Mills, Sylacauga, Ala., (all three members of the council's board of directors) and J. Craig Smith, executive vice-president, Avondale Mills. Second row: Dr. Wm. P. Jacobs, president, American Cotton Manufacturers Association, Charlotte, N. C.; W. Harrison Hightower, president, Thomaston Cotton Mills, Thomaston, Ga.; Charles A. Cannon, Cannon Mills, Kannapolis, N. C.; W. A. Floyd, Victor-Monaghan Mills, Greenville, S. C.; A. B. Edge, president, Callaway Mills, La Grange, Ga. Top row: A. W. Fisher, Cannon Mills, Kannapolis, N. C.; A. W. Babbitt, Clark Thread Co., Clarksdale, Ga.; Dr. C. T. Murchison, president, Cotton-Textile Institute, New York; L. L. Brown, International Shoe Co., Malvern, Ark.; and H. E. Rietz, executive secretary, Southern Combed Yarn Spinners Association, Gastonia, N. C.

Sitting Pretty

With a sparkle in her eye, an assurance of flattering and envious glances . . . any woman is "sitting pretty" when wearing *Dura Beau*-finished hose. For who could resist the charm of their misty sheerness, their leg-clinging sleekness and their smartness? . . . Too, the longer wear—made possible by *Dura Beau*—exerts irresistible influence on sales-volume, raising it ever higher.

Dura Beau FINISHES
Reg. U. S. A. and Canada

SCHOLLER BROS., INC.

Mfrs. of Textile Soaps, Softeners, Oils, Finishes • Collins & Westmoreland Sts., Phila. 34, Pa. • St. Catharines, Ont., Can.

THE OLDEST AND LARGEST

Manufacturers of

RING SPINNING AND TWISTER TRAVELERS

IN THE UNITED STATES

NATIONAL - ETARTNEP FINISH
A NEW CHEMICAL PROCESS

American • Hicks • Wilson

United States Standard
Wentworth Double Duty
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MAKES STRONGER YARN

Double Duty and Gravity Travelers embody a new heat-treating principle, which reduces to the irreducible minimum the frictional contact between the Traveler and the Ring. The life and endurance of the Traveler is not only multiplied by two, and oftentimes to a greater degree, but the life of the spinning Ring is increased in relative proportion to the lessened frictional load.

NATIONAL RING TRAVELER COMPANY

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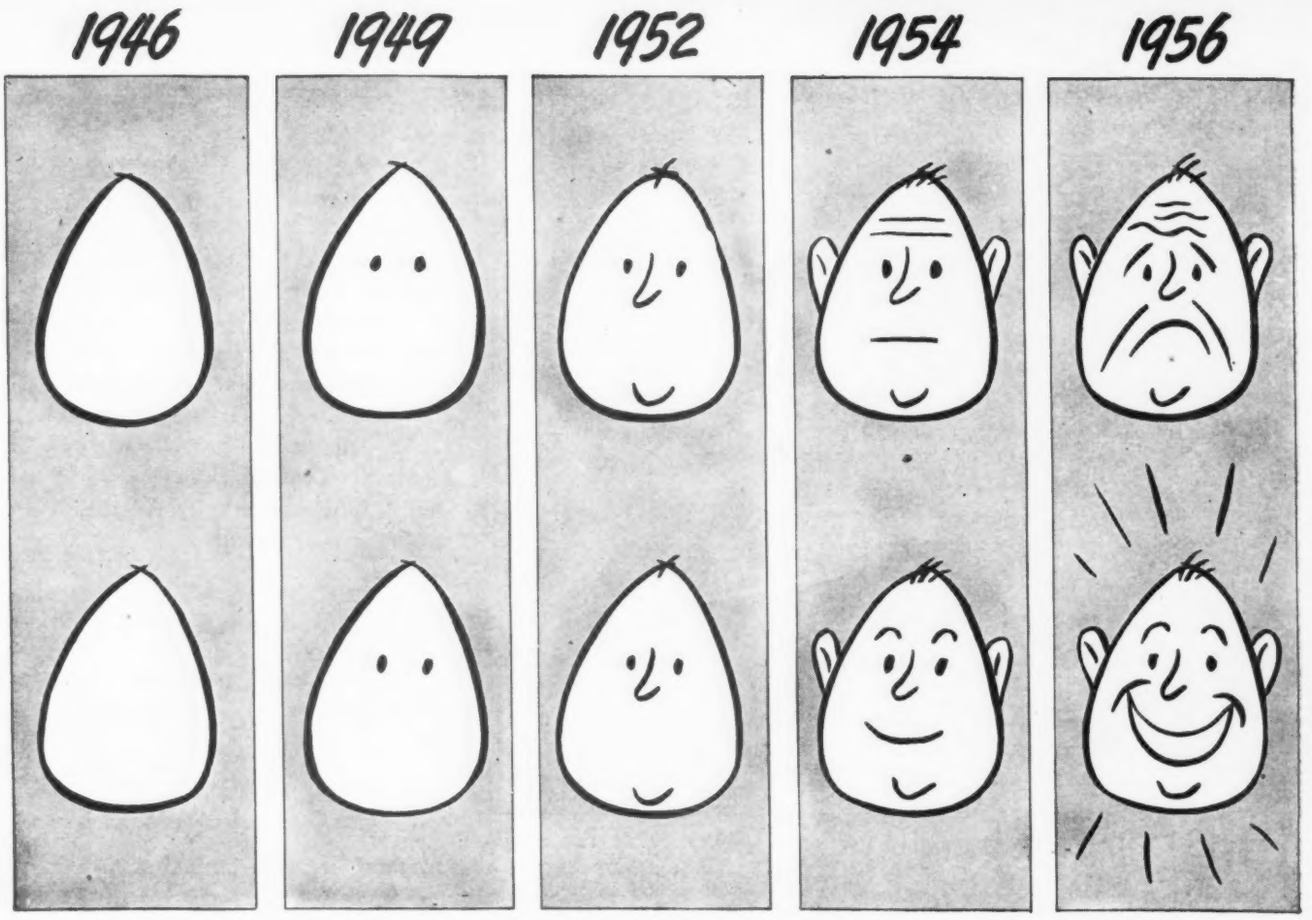
PAWTUCKET, R. I., 354 PINE STREET **CHARLOTTE, N. C.**



Two ways your face can grow in the next few years

USUALLY, our faces show what's happening to us. For instance, suppose financial matters are constantly on your mind.

Suppose you know that there's practically no cash reserve between you and trouble.

It would be surprising if your face didn't show it.

But suppose that, on the contrary, you've managed to get yourself on a pretty sound financial basis.

Suppose that you're putting aside part of everything you earn . . . that those dollars you save are busy earning *extra* dollars for you . . . that you have a nest egg and an emergency fund.

Naturally, your face will show *that*, too.

There's a simple and pretty accurate way to tell which way your face is going to go in the next few years:

If you are buying, regularly, and holding as many U. S. Savings Bonds as you can, you needn't worry.

Your face will be among the ones that wear a smile.

Buy all the Bonds you can... keep all the Bonds you buy

TEXTILE WORLD

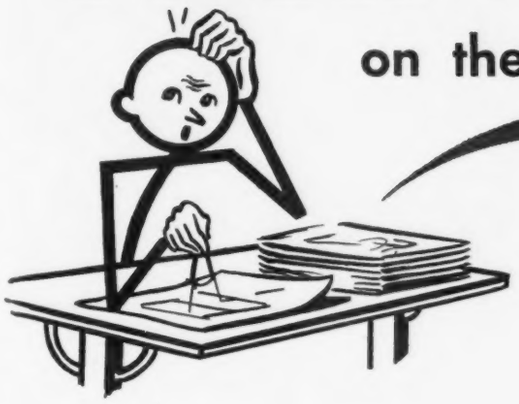
This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

Maybe you don't need a bigger plant . . .

. . . when you can

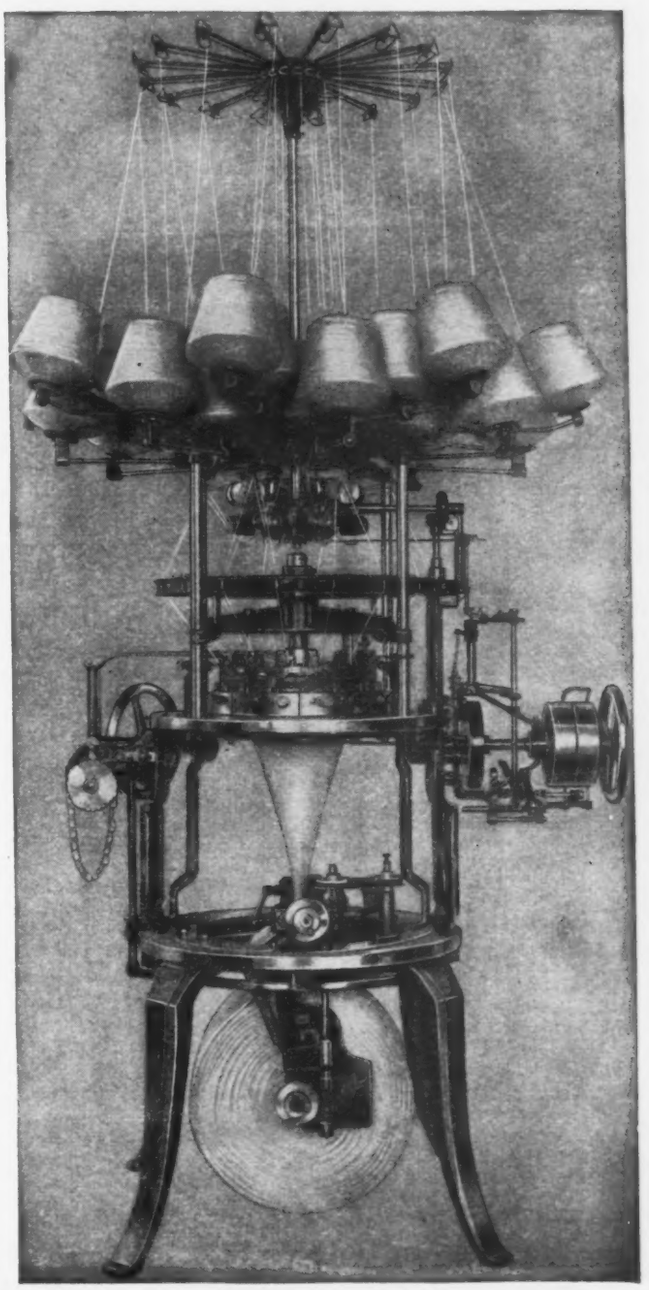
DOUBLE PRODUCTION

on the *SAME* floor space



Yes—your plant is quite likely big enough for years to come because you *can expand* your production with this

WILDMAN
Multiple-Feed Rib
MACHINE



Without requiring even one inch more floor space than your 8-feed machines now require, this Wildman Multiple Feed will Double your output—or better. It uses only about a third more power—and delivers a finer, cleaner, more uniformly perfect garment, with trouble-free operation.

Postpone your blueprints for building expansion—expand within your plant instead.

WILDMAN MFG. CO., Norristown, Pa.

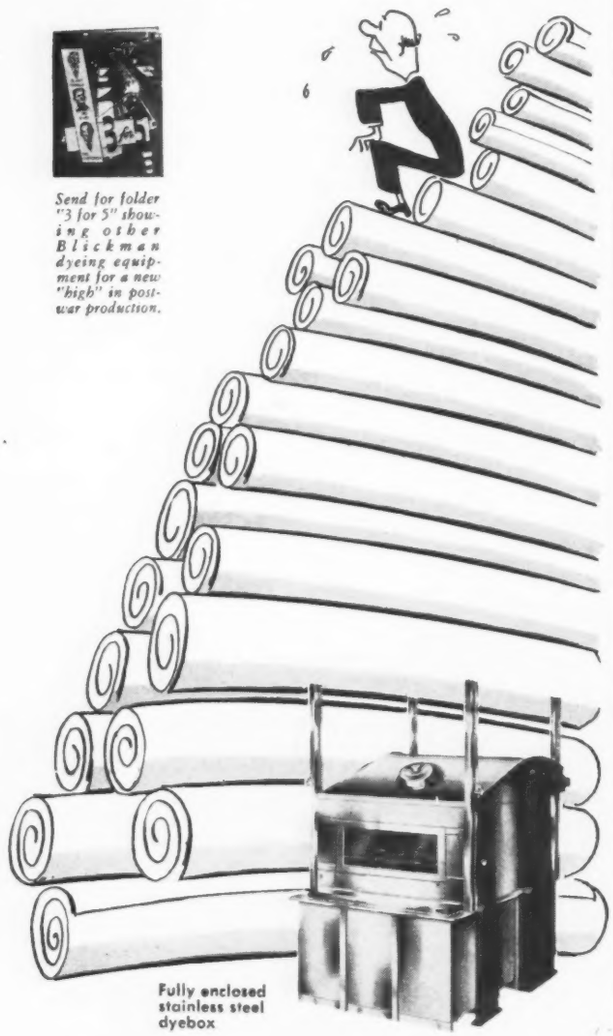
Peak Load Problems

SOLVED FOR DYERS

When your rush season is on—with your salesmen clamoring for delivery and your customers begging for action—the real profit possibilities of Blickman stainless steel textile dyeing equipment are *most* in evidence.

The modern, fully enclosed, Blickman dyebox is a perfect example. You can clean it in minutes instead of hours. You can change colors after a quick rinse instead of a boil-out. And you, therefore, get more runs per day. Add to that the important savings in steam, water, and operating time this dye box produces and you can figure by simple arithmetic that one busy season will pay for the equipment. Investigate now.

Send for folder "3 for 5" showing other Blickman dyeing equipment for a new "high" in post-war production.



Fully enclosed stainless steel dyebox

S. BLICKMAN, Inc.

402 GREGORY AVENUE, WEEHAWKEN, NEW JERSEY

Manufacturers of stainless steel textile equipment, dyeboxes, linings, cylinders, dry cans, hoods and tanks.

NEWS ABOUT SUPPLIERS

(*Continued from page 176*)

chemicals. He will serve as special assistant to D. S. Dinsmoor, general manager of the company's Merrimac Division, with headquarters at Everett, Mass. Monsanto has appointed Sam R. Clement as assistant general branch manager of its Birmingham sales district, which comprises the Southeastern states and his headquarters at Birmingham, Ala. G. Y. Frankle is general branch manager at Birmingham.

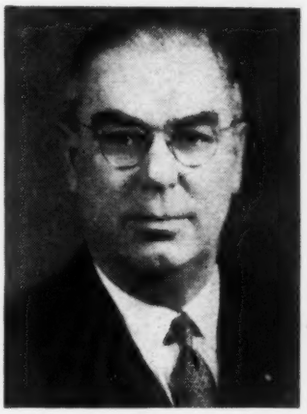
Pennsylvania Salt Mfg. Co., Philadelphia, has appointed James McWhirter as superintendent of its Natrona plant, succeeding Charles G. Boone, who retired recently.

Brown Instrument Co., Philadelphia, plans to complete installation this year of $500,000 in new manufacturing, processing, and development equipment begun in 1945. The company has started its new industrial instrument maintenance and repair course on Feb. 18, which will continue to May 22. Twenty-four sales and 11 service engineers have been added to the organization's staff and assigned to 22 different branch offices. All 35 men have been students in the Brown instrumentation school.

Glyco Products Co., Inc., Brooklyn, N. Y., has opened its new Chicago sales offices at 30 North Dearborn St. This office is under the supervision of Dr. George H. Goodyear, who has been closely associated with the technical sales development of the company's products for many years.

Hooker Electrochemical Co., Niagara Falls, N. Y., has assigned Lloyd S. Bovier to the sales development department with headquarters at Niagara Falls. Charles Daving has been assigned to the Cincinnati, Ohio, office of the company in the capacity of salesman.

Taylor Instrument Cos., Rochester, N. Y., has appointed J. E. Hart as manager of the Boston sales office from which point the New England territory is covered. He returns after two years service with WPB. J. A. Grant, who started in the Philadelphia office nearly ten years ago and was later in charge of sales activities centered in Greenville, S. C., has returned to Philadelphia to be part of that sales organization after three years service with the Navy with the rank of lieutenant commander.



FRANK R. MARKLEY, who has been appointed general sales manager of Sun Oil Co., Philadelphia. Mr. Markley will serve as assistant to Samuel B. Eckert, vice president in charge of marketing, in the conduct of all of Sun's sales activities. He has been with Sun since 1920. Ray H. Anders succeeds Mr. Markley as manager of the industrial products department.

Columbia Chemical Division of the Pittsburgh Plate Glass Co., Pittsburgh, has appointed William L. Platt as sales representative at the company's offices, 300 Babcock St., Boston, Mass.

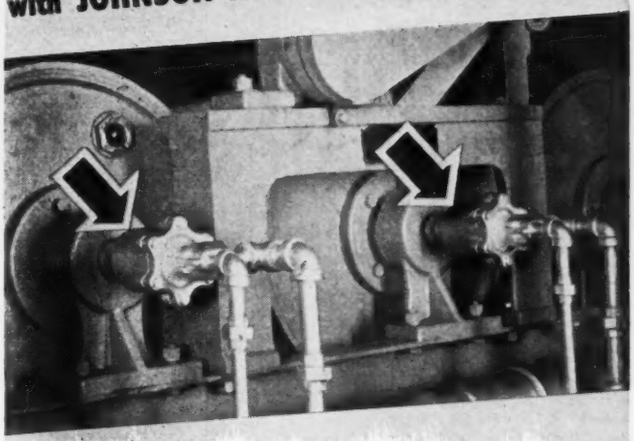
Stein, Hall & Co., Inc., New York, has appointed J. R. Adams as manager of the development department of its technical division. Lt. Col. Adams served for five years in the Army Chemical Warfare Service in charge of incendiary bomb development. Edwin A. O'Neill, for five years

JOHN O. LOGAN, who has been appointed an assistant general manager of sales of The Mathieson Alkali Works, New York. He has been with Mathieson since 1931. At the same time, Harry P. Smith was appointed New York district sales manager, a post formerly held by J. B. Peake, who continues as an assistant general manager of sales.

save

manhours
production time
maintenance cost

with JOHNSON ROTARY PRESSURE JOINTS

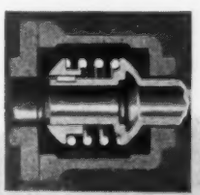


● Operating men everywhere have learned that the Johnson Joint is far more than just a better stuffing box or steam fit. It's an effective way to help solve many of your operating problems, this year and every year.

To begin with, the Johnson Joint steps up production. Its simple trouble-free design saves valuable time that is wasted when machines are shut down to repack or repair stuffing boxes. In addition, it provides a simple, neater way to install more efficient methods of syphon roll drainage.

While production goes up, maintenance costs come down. The Johnson Joint has no packing to wear out, needs no oiling or adjusting, and absorbs trouble-causing misalignment—both lateral and angular.

Reducing maintenance of course stretches your manpower—makes hard-to-get help available for more productive work. This is particularly important today. From every standpoint, you never had greater need for the Johnson Joint than you have *right now.*



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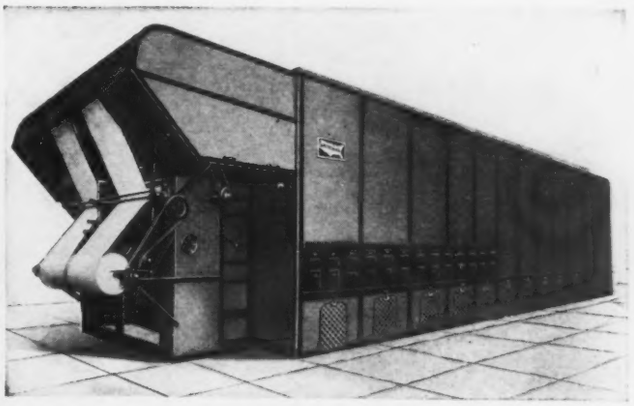
The Johnson Corporation

814 WOOD STREET

NEED HOT WATER?

The simplest, quickest, most economical way to heat water with steam is with the Johnson Instant Heater. Needs no reducers; hooks right up to high pressure steam lines. Available now in lower cost, all steel construction, or for use in process work with heating chamber of copper tubes.

Complete range of sizes, capacities; write for bulletin



Why "NATIONAL" *Means Lower Drying and Curing Costs . . .*

The ultimate cost of drying piece goods is measured by the time required to put a run through the machine; the uniformity at which the material is dried; and the extent of spoilage . . . bar marks, creases and other defects resulting from passage of the material through the machine.

On each of these counts, the "NATIONAL" Automatic Piece Goods Dryer assures *profitable performance and results* to a far greater degree than any other of its type. For proof of this, just ask our representative to give you all the details . . . without cost or obligation.

★ ★ ★

THE "NATIONAL" LINE: Automatic Piece Goods Dryers. Straight Run and Return Type Tenter Drying Systems. Yarn Dryers and Conditioners. Truck Type Skein Dryers. Apron Type Stock Dryers and Carbonizing Equipment. Print Goods Dryers. Truck, Tray and Conveyor Type Test Dryers for Textiles, Chemicals, Food Products, etc.

NATIONAL

THE NATIONAL DRYING MACHINERY CO.

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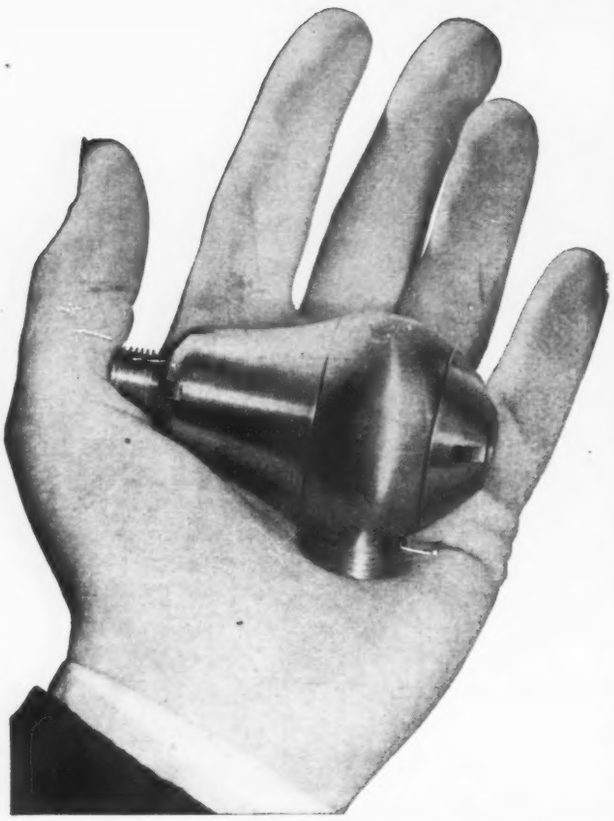
New England Agent: C. H. INGALLS — Providence, R. I.



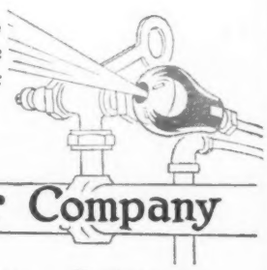
The Reliable Turbomatic

THE PARKS TURBOMATIC SELF-CLEANING ATOMIZER is "dia-fram-atic" (as are fuel pumps in automobiles).

"Dia-fram-atic" cleaning mechanism, with positive, straight line construction, is the best insurance against sticking. Does away with stuffing-boxes. Prevents leakage of expensive compressed air.

With air and water ports cleaned simultaneously by this simple, positive arrangement, quality and quantity of evaporation will continue after years of active work.

No piping changes. The self-cleaning Turbomatic interchangeable with earlier and other models.



Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

a member of the sales staff of the Philadelphia branch office, has been appointed acting manager of the company's St. Louis branch.

Pack-Rite Machines, Division of Techtmann Industries, Inc., are now located at 714 West Wisconsin Ave., Milwaukee 3, Wis., where there is six times the previous manufacturing and office space.

Diamond Alkali Sales Corp., Pittsburgh, Pa., has taken over the operation of the Baltimore and Boston branches of Sunshine Soda Co. The Baltimore branch will be merged with Diamond's Philadelphia district office located at 12 South 12th St., of which C. F. Wolters, Jr., is manager. In Boston, a new Diamond Alkali sales office has been established to take over the operation of the former Sunshine Soda branch in that city. The offices are at 80 Federal Street. H. B. Clark, formerly with Diamond's New York sales organization, will serve as Boston branch sales manager.

Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., has appointed Dr. Waldo H. Kliever to the newly-created post of director of research. He will coordinate research activities in all Honeywell divisions in Minneapolis, and instigate new research projects in the field of automatic control devices.

American Gas Association's conference on industrial and commercial gas, originally scheduled in Toledo for Mar. 28 and 29, has been moved one day to March 29 and 30. It will be held at the same location, the Commodore Perry Hotel.

Crocker-Wheeler Division of Joshua Hendy Iron Works, Ampere, N. J., has appointed I. C. Smith to the position of chief engineer. He joined the company in 1942.

Borne-Scrymser Co., Elizabeth, N. J., has reappointed Ralph G. Benson, after three

DON G. MITCHELL, who has been elected executive vice president of Sylvania Electric Products, Inc., New York. He joined Sylvania as vice president in charge of sales in 1942.

years of Navy service, to his former duties as industrial lubrication engineer in the New England area.

A. J. Kroog Co., of Atlanta, Ga., with office and warehouse at 902 West College Ave., Decatur, Ga., has been organized by A. J. Kroog. This company represents: Edge Moore Iron Works; Crocker-Wheeler Division; Philadelphia Gear Works; U. S. Hoffman Machinery Corp.; Lake Erie Engineering Co.; Electric Arc, Inc., and U. S. Gasket Co. Mr. Kroog was formerly with General Electric Co., Southeastern district, with headquarters in Atlanta. For the last 3½ years, he has been in the Navy and was separated with the rank of lieutenant commander.

The Reliance Electric & Engineering Co., Cleveland, Ohio, is erecting an addition to its plant to provide 48,000 sq. ft. and the cost is $350,000 with equipment.

Allis-Chalmers Mfg. Co., Milwaukee, Wis., has named Melvin C. Shaw as manager of the blower and compressor department, succeeding John Avery, who has resigned to become president of a blower corporation in Indiana.

Wyomissing Executives Celebrate 80th Birthdays

One of the longest partnerships in American business reached another milestone this month when the founders of Wyomissing Industries, partners for 54 years, were honored by over 6000 employees on their 80th birthdays. Ferdinand Thun and Henry Janssen were born in Barmen, Germany, in 1866—Mr. Janssen on Feb. 8, Mr. Thun on Feb. 14. They did not meet until they reached America. Today the partners head three companies—Berkshire Knitting Mills, established in 1906, Narrow Fabric Co., established in 1900; and Textile Machine Works, established in 1892. Mr. Janssen is president of Textile Machine Works, and Mr. Thun is president of Berkshire Knitting Mills.

GET MAXIMUM SAFE PRODUCTION FROM YOUR PLANT EQUIPMENT.. with a JONES TACHOMETER.

Control of speeds in textile operations is vitally important. With Jones Portable or Fixed Tachometers you can instantly and accurately measure speeds either in R.P.M.; feet or yards per minute, total output, or any desired indication.

By checking R.P.M. of motors, rollers, shafts, etc., they'll help you synchronize your plant equipment to more efficient and uniform production. Frequent routine observations of machinery speed will insure operation at a rate safe for your product, safe for your machine and safe for your profit on goods delivered.

Type B
JONES TACHOMETER

Moderately priced Jones Tachometers are light weight, heavy duty, and accurately calibrated. Available in many different ranges to cover various machine speeds. Operate in either direction of rotation. Unaffected by magnetic or temperature conditions.

Write for New Bulletin

JONES MOTROLA CORP.

437 FAIRFIELD AVENUE STAMFORD, CONN.

4 REASONS WHY SPLIT BALL BEARINGS

can solve your bearing problems

1 Split Ballbearings may be used where other a-f bearings cannot.

2 May be used as intermediate bearings, supplementing solid race bearings.*

3 Are used where split race bearings are the most economical to service.

4 Where sound engineering dictates integral design rather than keyed construction (gear clusters, etc.)

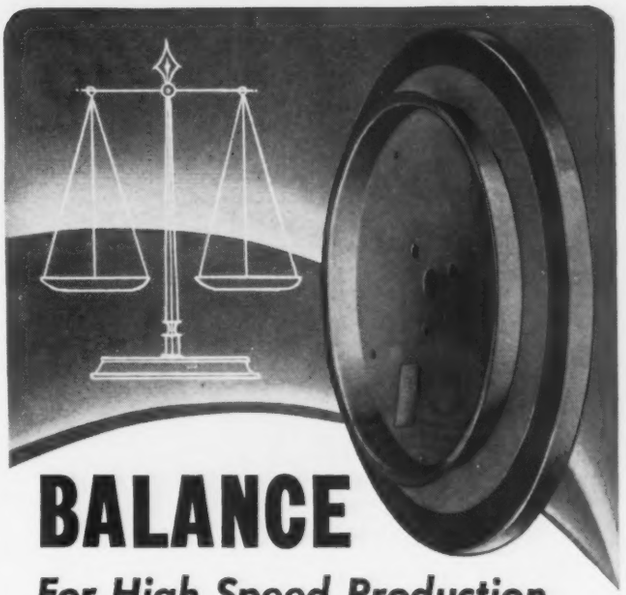
* Permits use of a-f bearings on all main bearings of crankshafts which without the use of Split Ballbearings would be impossible.

Catalog on request. Ask for bulletin TW-2-46

·DIVISIBLE RACE BEARINGS·

SPLIT BALLBEARING CORPORATION

LEBANON, NEW HAMPSHIRE, U. S. A.



BALANCE

For High Speed Production

Hubbard replacement Beam Heads are designed and constructed for the exact balance necessary to the smooth operation of today's high speed looms. Regardless of speed or tension Hubbard Beam Heads help to keep vibration to an irreducible minimum.

The long service life of Hubbard equipment assures you lower operating cost. Die formed steel tire effectively protects the edges of Hubbard replacement Beam Heads and seals them against moisture penetration. Jagged edges cannot form on tire to injure operator or threads.

Years of field research and production experience have enabled Hubbard to produce smooth operating, long-lasting equipment. Let us help you with your beam and bobbin problems. Send for complete information on Hubbard products.

OTHER HUBBARD TEXTILE MILL PRODUCTS

Stainless Steel Spools and Bobbins

Non-corroding, strong, stain-proof. Available in a wide range of sizes.

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Head protected by die-formed heavy gage metal tire to prevent warping, breakage or splintering.

Sectional Warp Beams

Strong, rigid, lightweight magnesium alloy. Withstands the extreme pressures of synthetic yarns.

HUBBARD SPOOL COMPANY

Since 1912, manufacturers of Spools, Reels and Related Products

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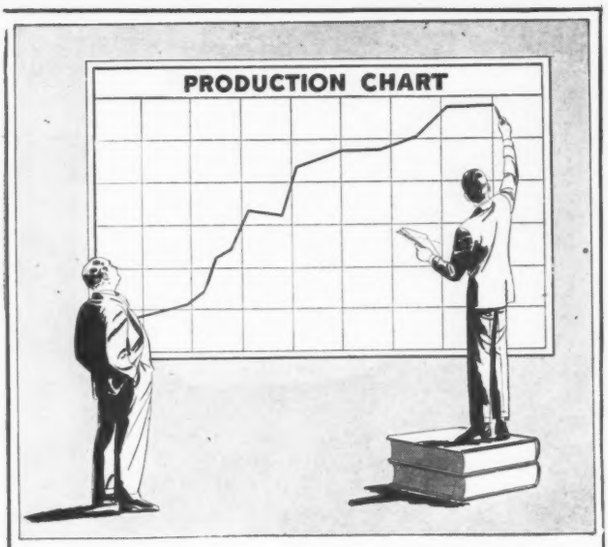


"Say—

WHO THOUGHT OF THIS INFRA-RED IDEA?"

It was Wabash, of course!

Wabash who made infra-red a practicable tool for increasing industrial production—and cutting manufacturing costs.

It was Wabash who developed the special Birdseye tungsten filament that provides uniform distribution of radiant energy . . . at the wave lengths best suited for the purpose.

Wabash who devised the sealed-silver reflector lining that always stays bright—who locks each lamp with the "Superlok" lamp base that even terrific tunnel temperatures cannot loosen.

And it's Wabash who helps you engineer each application, to meet the requirements of *your* job.

So, remember, when you make your plans to profit by the proved advantages of infra-red in speeding up baking, drying and preheating processes—it will pay you to come to the company that is first in the field of infra-red.

WABASH CORPORATION

345 Carroll Street, Brooklyn 31, N. Y.

A Subsidiary of Sylvania Electric Products Inc.

WABASH-BIRDSEYE

FIRST IN INFRA-RED

NEWS ABOUT Mills

Cotton Mill News

American Yarn & Processing Co., Mt. Holly, N. C., awarded contract to J. A. Jones Construction Co., Charlotte, for a warehouse. Cost is slightly under $100,000. Firm has purchased Dixon Mills, Inc., Gastonia, N. C.

Augusta, Me.—Stockholders of Edwards Mfg. Co., Augusta; Androscoggin Mills, Lewiston, and York Mfg. Co. have voted to sell the firms' physical properties and inventories. In the case of the Edwards and the York companies the sale is to the Bates Co., and in the case of Androscoggin to the Bates Mfg. Co. The net effect is that the five Maine mills, Bates, Androscoggin, Hill, Edwards, and York will all be operated as one company.

Ayer, Ltd., Lachute, Que., started work recently on a two-story, 334 ft. x 62 ft. addition to its mill. Cost about $80,000.

Canadian Cottons, Ltd., Hamilton, Ont., plans further work at its plant, including alterations to dye house. Cost about $56,000. Work already under way involves expenditure of $50,000.

Cohoes Yarn Mills, Inc., Cohoes, N. Y., lately chartered with capital of $200,000, have begun operations in former Root Mills property, Mohawk and Remsen Sts. New company is headed by Emil A. Dahlke, 110 Clermont St., Albany, N. Y., previously operating Albany Yarn Co., Albany.

Colonial Mills, Inc., New York, purchased the Rockingham, N. C., mill (No. 2) of Hannah Pickett Mills and took possession Jan. 2. This plant weaves cotton, wool, and synthetic-blended suitings.

Crown Mfg. Co., S. Attleboro, Mass., has begun modernizing its plant. New high-speed warpers and slashers have been installed and new looms are expected to be in operation soon.

Dalton Textile Corp., Dalton, Ga. has completed erection of a one-story building and will equip with initial machinery to provide for output of about 10,000 lb. of yarn per week. The cost is estimated over $65,000 with machinery.

Drummondville Cotton Co., Ltd., Drummondville, Que., plans a 105x152 ft., one-story addition for warehouse. Cost about $85,000.

Esmond Mills, Ltd., have completed arrangements for location of a 72-loom plant in Perth, Ont. According to the plans, the first unit of the plant will be erected immediately at a cost of approximately $150,000. The building is to be a single-story structure, with over 30,000 sq. ft. of floor space.

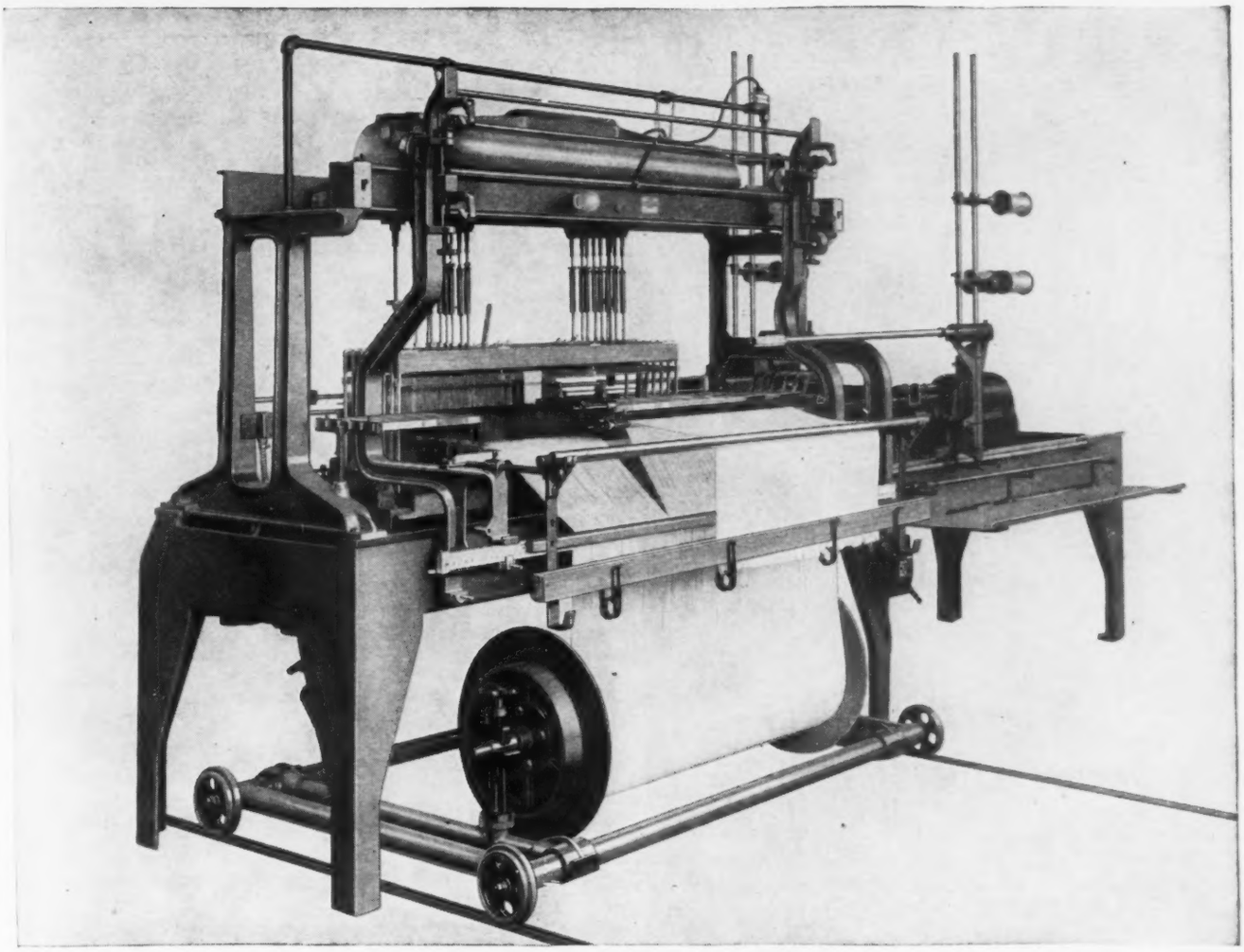
Fran Jean Mill, manufacturers of upholstery, drapery, and polo shirt material, has begun operation at Kannapolis, N. C., with 32 looms. More looms will be installed shortly. The plant is owned by F. C. Stough of Cornelius, N. C., secretary of Cornelius Cotton Mill, Inc., and Ernest Robinette, formerly with Highland Park Mill, Charlotte, N. C., is the manager.

Hathaway Mfg. Co., New Bedford, Mass., has purchased the four-story building formerly owned by Dartmouth Mfg. Co. The property has been owned more recently by the city of New Bedford and was obtained by Hathaway through an auction at a price of $41,000. The property includes 111,564 sq. ft. of land.

Hickory Fabrics, Inc., Hickory, N. C., has been purchased for about $200,000 by a group of Hickory businessmen, with C. H. Keith as president and R. Z. Hand as superintendent.

Highland Park Mfg. Co., Charlotte, N. C., plans one-story addition to the weave room at unit No. 3 in Charlotte and a two-story addition to the slasher room at unit No. 2 in Rock Hill. Cost, about $100,000 each. New equipment will be added at both plants.

Huntsville Mfg. Co., to be incorporated in Alabama by M. Lowenstein & Sons, Inc., of New



GREATER CAPACITY FOR DRAWING-IN WORK

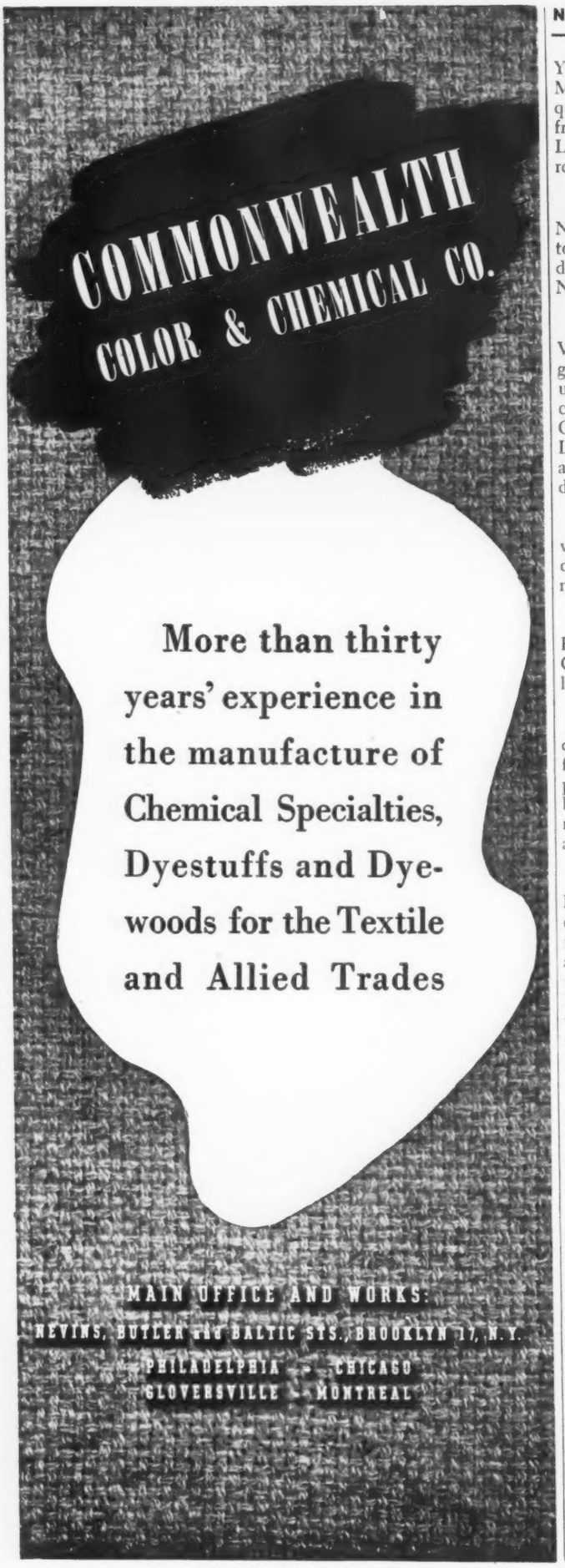
This new Barber-Colman Drawing-In Machine provides greater capacity to handle high sley warps and fancy patterns characteristic of modern goods. The machine is made in several sizes and capacities up to a maximum of 120" reed width to draw *up to 24 harnesses, 8 banks of drop wires, and reed.* It can be used on rayon, cotton, or wool — and therefore is applicable in all types of weaving mills. The machine is fast, and the correct heddle is automatically selected for each end according to a punched sheet-metal pattern strip. In rayon mills especially, where frequent harness-cleaning is a necessity, this machine will effect substantial savings in time and expense over the slower and costlier method of hand drawing-in. It can handle a wide variety of work, as it is designed to draw warps from a flat sheet, split sheet, double beam, or one and one lease. Flat steel heddles, designed to float freely the full length of the heddle bar, are used. For an estimate showing the savings to be made by use of this machine on the type of work now in your mill, see your Barber-Colman representative.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND


COMMONWEALTH
COLOR & CHEMICAL CO.
More than thirty years' experience in the manufacture of Chemical Specialties, Dyestuffs and Dyewoods for the Textile and Allied Trades
MAIN OFFICE AND WORKS:
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GLOVERSVILLE - MONTREAL

York, will operate the Merrimack Mills, which were recently acquired by the New York firm from Merrimack Mfg. Co., Lowell, Mass. A. D. Elliott will remain as manager of operations.

Johnston Mills Co., Charlotte, N. C., plans two-story addition to increase space of the spinning department at cost of $100,000. New machinery will be installed.

Little Cotton Mfg. Co., Wadesboro, N. C., newly organized, has been operating under lease the Anson Mfg. Co.'s cotton yarn mill at Wadesboro. Officers of the company are C. L. Little, president and manager, and W. L. Bennett, vice-president.

Louisville Textiles, Inc., Louisville, Ky., plan to double production and will install additional machinery.

Morgan Cotton Mills, Laurel Hill, N. C., awarded contract to Crawford Sprinkler Co., Charlotte, for a new sprinkler system.

Morrison Warp Co., 166 Middle St., Providence, R. I., was formed recently and is now in production on cotton and blended warps. Hugh A. Morrison is president and manager and D. B. Eddy is treasurer.

National Automotive Fibers, Inc., Detroit, Mich., makers of cotton wadding and allied materials for automobile interiors, will ask bids on general contract for new one-story mill at Louisville, Miss. Cost about $225,000, with machinery. N. W. Overstreet, 201 North Lamar St., Jackson, Miss., is architect.

Pepperell Mfg. Co., Fall River, Mass., is proceeding with a $100,000 program to repair explosion damage at the Bedford Street plant.

Rancho Cotton Mills, Salisbury, N. C., has been incorporated with authorized capital of $200,000 and subscribed stock of $4,000 to manufacture textile materials. Incorporators: W. F. McCanless, Nona B. McCanless, George M. McCanless and Ross W. McCanless, all of Salisbury.

Rhodes-Rhyne Mfg. Co., and **Indian Creek Mill**, Lincolnton, N. C. have sold the controlling interest of the Rhodes family to H. S. McIntyre, of Charlotte, N. C., and Anniston, Ala., and Bernard Weill and Stanley Rygler, of New York. McIntyre owns the Amber Textile Mills in Anniston and Weill is president and Rygler is secretary and treasurer of the Aristex Corp., New York. McIntyre is vice-president of this last-named organization.

Santee Mills, Inc., Bamberg, S. C., have been sold to E. M. Pinto and Leo M. Olivar, Moroccan capitalists, principal owners, and several associates, including Charles S. Henerey, president of the former company who will retain that office. E. A. Myers continues as superintendent. Pinto, Olivar, and E. Lasry are vice-presidents.

Troy Textiles, Inc., Troy, Ala., has let contract to Whaley Lumber Co., Troy, for one-story mill.

Union-Buffalo Mills Co., with plants at Union, Buffalo and Fairmont, S. C., has been purchased by United Merchants & Manufacturers, Inc.

Wool Mill News

Antietam Woolen Mills, Stony Creek, Pa., filed notice at the state capitol that they will operate a woolen mill.

Brampton Woolen Co., Newport, N. H., is constructing a two-story concrete and tile building for carding and spinning. A number of new machines will be installed.

D. Fairfield & Sons, Ltd., E. Kildonan, Man., Canada, recently organized, is reported planning early construction of a new one-story woolen mill. Cost with equipment, about $60,000.

Hill Woolen Mills, Inc. have bought the old Pequot Mills property, Montville, Conn. (previously reported) and plan to install machinery for the production of weaving and knitting yarns. This property has a floor space of about 50,000 sq. ft. Officers of the new concern are: M. L. Kander, president; W. S. Hill, vice-president and general manager; A. Urbanati, treasurer; and B. Hochberg, secretary.

Kemlin Woolen & Worsted Mill, Seneca, S. C., has purchased property on which construction as soon as possible of a modern building is planned. The building will contain automatic looms and other equipment.

Lebanon Woolen Mills, Lebanon, N. H., are beginning work

STANDARD WORSTED TOPS
TOPS
STANDARD MOHAIR TOPS

FRANCIS WILLEY & CO.
300 SUMMER STREET
BOSTON, MASS.

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Earn a Manufacturing Profit By Using the Best Machinery and Supplies

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THE ACCEPTED STANDARD

GET THEM ALL

WHEN you select the location for your new plant, be sure that you locate where there are to be found the greatest number of factors contributing to successful operation.

How to be certain? Use the services of our staff of trained specialists. Possessing long experience in the many matters associated with industrial locations, they can quickly supply you with pertinent and comprehensive data on sites that will meet your requirements.

And there are many excellent sites in the six states served by the Seaboard Air Line Railway awaiting your inspection and approval.

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THROUGH THE HEART OF THE SOUTH

WHITMAN YARNS

WORSTED · COTTON · SPUN RAYON

WHITMAN SERVICE

1852-1946

During 94 years The William Whitman Company, Inc., and its predecessors have served the interests of important mills and users of yarns, seeking to establish for its customers a steady flow of dependable, quality yarns.

ARLINGTON MILLS

LAWRENCE, MASS.

Bradford Spun Worsted Yarns, Natural and Slub-dyed Colors and Mixes.

MONOMAC SPINNING CO.

LAWRENCE, MASS.

French-spun Worsted and Merino Yarns. Specialty Yarns—Rabbits Hair, Rayon, Acetate and Other Blend Yarns.

NONQUITT MILLS

NEW BEDFORD, MASS.

Cotton and Spun Rayon Yarns, Merino Blends, Specialty Rayon and Wool Mixtures.

WILLIAM WHITMAN COMPANY, INC.

SELLING AGENTS

BOSTON, 78 Chauncy St. NEW YORK, 261 Fifth Ave.
PHILADELPHIA, 1600 Arch St. CHARLOTTE, Commercial Bank Bldg.

on a new mill. Ernest L. White, Lebanon, has the general contract and J. Morgan, Malden, Mass., has the contract for steel work.

Madonna Mill, Inc., a new company, is opening a plant in North Adams, Mass. John R. Dunn, formerly with Norad Mills and Blackinton Mills Co., is president. The company will manufacture only wool yarns for the present.

Pedro Cofa Nieta and Rafael Larriva, Mexican industrialists, plan to spend more than $1,250,000 for equipment for a plant they plan to set up in Tlaxcale, Mexico. Wool and cashmere fabrics will be the chief products of the mill.

John E. Teger Woolen Co., Inc., Reading Pa., is a new woolen fabrics manufacturing mill with Edward Teger as president and treasurer.

Rayon & Silk Mill News

American Viscose Corp., Marcus Hook, Pa., plans multi-story addition to branch mill at Meadville, Pa., for expansion in acetate division, reported to cost over $650,000, with equipment.

Ann & Hope Mill, Lonsdale, R. I., has been sold to Martin Chase and Abraham Blackman for $435,000. The mill contains approximately 400,000 sq. ft. of floor space. Chase and Blackman intend to manufacture synthetic materials for clothing and other articles, as well as other products.

Belding Heminway Corticelli Co., New York, is completing plans for a new mill at Morristown, Tenn. to be operated, it is understood, in the name of Tennessee Textile Co. The plant will be equipped for throwing and will cost about $1,000,000. Leo F. Caproni, New Haven, Conn., is architect and engineer.

Burlington Mills Corp., Greensboro, N. C., has purchased controlling interest in Phenix Mills, Inc., King's Mountain, N. C., and will continue operations at both local Phenix Mills.

Canadian Industries, Ltd., Kingston, Ont., Nylon Division, has tentative plans for large addition to mill for raw material manufacture, consisting of several units, reported to cost over $2,500,000. Erection will follow completion, scheduled in 1946, of new addition now under way, representing an investment of close to $4,000,000.

Celanese Corp. of America, Inc., has authorized an expansion program at the Narrows, Va., mill which will cost about $10,000,000. New buildings and machinery will triple present production. Program scheduled for completion by the end of 1946.

Columbus Mills, Inc., Columbus, N. C., recently organized, are establishing a new local mill for manufacture of narrow fabrics. Charles Ramsey is superintendent.

Leon Ferenbach Co., Johnson City, Tenn., has completed an expansion program at its throwing mill, which has practically doubled the output.

Industrial Rayon Corp., Cleveland, Ohio, is planning construction of a $25,000,000 plant to make rayon yarn. The expansion will increase annual production of yarn by 30 million pounds.

Luray Textile Corp., Luray, Va., plans to spend about $200,000 to integrate its throwing and weaving operations. About 100 modern looms and auxiliary equipment will be installed.

Phillipsburg, N. J.—A new 120x260 ft. rayon weaving plant is being built in Phillipsburg by John R. McGinley, who now operates a weaving plant in Easton, Pa.

Plexon Plastic Threads, Inc., 438 West 51st St., New York, N. Y., has purchased plant of Bahan Textile Machinery Co., South Hudson St., Greenville, S. C., for about $75,000, and will remodel and equip for new mill for manufacture of plastic coated yarns. Production is scheduled to begin March 1.

Post Narrow Fabrics Co., Inc., Middletown, Conn., rayon ribbons, started renovating part of the Palmer Co. plant in Middletown and will use for manufacturing. A. B. Brooks, Paterson, N. J., will have charge of the plant.

Southern Silk Mills, Inc., Kernersville, N. C., in a program of modernization and expansion, has under construction a building which will be used as a weaving room. The building will represent a cost of $250,000, and will double the output. Completion is expected by March, 1946.

5 WAYS TO SPEED YOUR NYLON HOSIERY PROCESSING

Maintain smooth production flow — Improve hosiery quality

- **LAUREL Coning Oil #443 for better conditioning**
- **LAUREL Nynit C for better knitting**
- **LAUREL Supergel for cleaner hosiery**
- **LAUREZOL #6 for level shades**
- **LAUREL Peramel for fine appearance, lasting finish**

These **5** LAUREL NYLON Hosiery Processing Agents will enable you to speed up adequate stocks for your share of the tremendous demand for Nylon hosiery.

LAUREL NYLON Hosiery Processing Agents give you a hard-to-beat combination: **1.** an excellent conditioner, makes for better knitting; **2.** an effective lubricator, prevents sticking in pre-boarding operation; **3.** a thorough scour, leaves hosiery clean, ready for dyebath; **4.** an active dispersing agent, has greater penetration, produces level shades; **5.** a lasting finish, adds to the beauty and appeal of your hosiery.

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LAUREL SOAP MANUFACTURING CO., Inc.

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WILL DO YOUR PUMPING JOB Better

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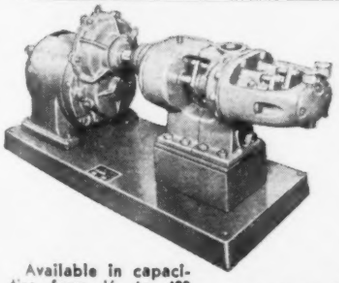

Available in capacities from ½ to 400 GPM and in different models and metals suitable to the job. Illustrated here is the industrial direct drive model. Complete new catalog upon request.

Bump Industrial Pumps will handle light or viscous liquids with positive displacement at any speed or pressure. They are self-priming under high vacuums or against head pressures, and can be operated at slow speeds without agitation, churning, or vibration within the pump. Bump Industrial Pumps deliver a constant volume per revolution regardless of speed of pressure, and because of their special design, operate at the lowest maintenance cost. As one company that has used a large number of Bump Pumps for years states, "They do a better job at a lower total cost to us than any other pump now offered on the market." Note principal of operation above and you'll see why the low maintenance cost.

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IT PROTECTS LONGER!

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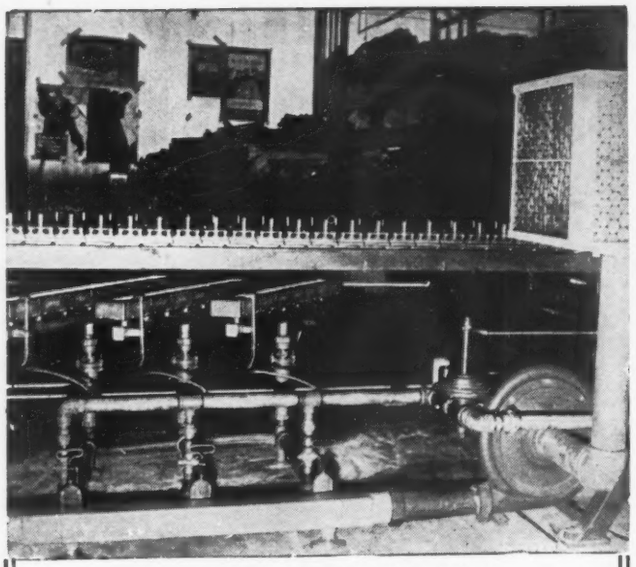

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HANDLING COTTON GOODS
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NEWS ABOUT MILLS

Susquehanna Mills, Inc., New York, has arranged to purchase mill property in Forsyth, Ga., and will establish a large capacity branch plant.

Tennessee - Eastman Corp., Kingsport, Tenn., has awarded contract to Johnson & Willard, of Knoxville, Tenn., for construction of a two-story addition to its administrative building at the local plant, at an estimated cost of about $300,000.

Textron Mills, Inc., 50 State St., Boston, Mass., have been chartered under Rhode Island laws, with capital of $500,000, as a subsidiary of Textron, Inc., to operate as the spinning, weaving, and dyeing unit of parent company. New organization will take over and operate mills at Manville, R. I.; Nemasket, Mass.; and Suncook, N. H. Another subsidiary has been formed under name of Manville Fabrics, Inc., Cumberland, R. I., to engage as a converting unit with capital of $1,000,000.

Verney Corp. will purchase the Greenwich Mills, East Greenwich, R. I. Verney already operates six rayon plants in New England and Canada.

Vogue Fabrics, Inc., Gaffney, S. C., has been incorporated with capital of $150,000 to manufacture cotton and rayon fabrics. W. C. Hamrick is president.

Knitting Mill News

Belvedere Hosiery Mill, Charlotte, N. C., newly organized (previously reported), has purchased a 25-acre site and has awarded contract to J. A. Jones Construction Co., Charlotte, for a one-story building.

Bear Brand Hosiery Co., Chicago, Ill., is reported planning new one-story branch mill near Paxton, Ill., reported to cost about $60,000 with equipment.

Blue Ridge Hosiery Mill, Hickory, N. C., newly organized, has begun construction of a building which will house about 40 machines for knitting men's mercerized cotton hose. Cecil Reese, Hickory, and Fred Dale, Longview, N. C., will operate the mill.

Campbell Fabrics Co., Charlotte, N. C., newly organized, has leased a plant from Nebel Knitting Co. The new set-up will involve expenditures of over $300,000. Fred Campbell, Charlotte, is president.

Cranford Hosiery Mill, Asheboro, N. C., has begun the construction of a modern plant, expected to go into operation about June 1. This new company will manufacture misses' hose. When the plant reaches maximum production, the machinery set-up will include 150 Comet machines.

Dapper Hosiery Mills, Inc., Clinton, S. C., have been incorporated with capital of $40,000 and will manufacture hosiery. Construction of a mill has been started. It is headed by C. W. Anderson and H. L. Nettles.

Elliott Knitting Mill, Hickory, N. C., will open a looper mill at Cleveland, N. C.

Golden City Hosiery Mill, Villa Rica, Ga., has purchased a building adjacent to the mill property to be used for expansion.

Hess, Goldsmith of California, Inc., is to be organized by Hess, Goldsmith & Co., of New York, to manufacture jersey fabrics to be styled, knitted, and finished in California. A. B. Clepper who resigns Apr. 1 as vice-president and director of Schwarzenbach, Huber Co., will be vice-president in charge of production at the California plant.

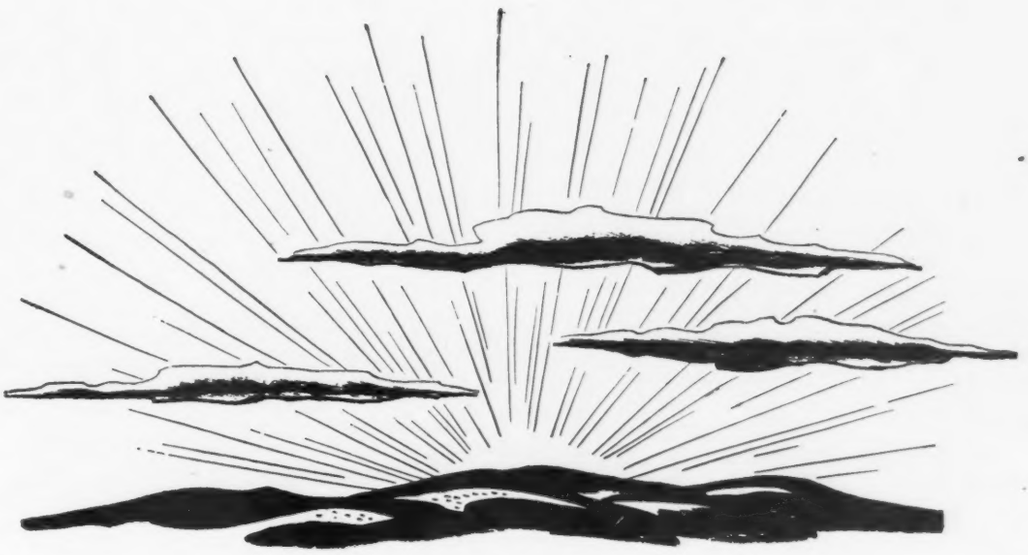
Knitters, Ltd., Lindsay, Ont., plans extensive plant improvement in 1946, including installation of a fluorescent lighting system and new knitting machinery.

Koenig Knitting Mills, Toronto, Ont., plan to erect a two-story, 69 x 182 ft. knitting mill at an estimated cost of $100,000.

McGaugh Hosiery Mills, Dallas, Tex., has begun erection of addition to mill for which general contract has been awarded to T. C. Bateson Construction Co., Dallas.

Monarch Knitting Co., Dunnville, Ont., has taken over the business of Joseph Simpson Sons, Toronto. Lord Barnby becomes president. J. A. Burns becomes chairman of the board, and E. L. Markon, general manager.

Nebel Knitting Co., Charlotte, N. C., plans construction of a 30,000 sq. ft. two-story addition to its main plant on Worthington Ave. at a cost of $150,000, and for the purchase of more than $500,000 worth of new equipment. Production at the



Leadership in a Great New Era

Scott & Williams is now beginning its eighty-first year of continuous service to the knitting industry. During these years the industry has grown tremendously...and S&W has been a consistent leader in the field of circular knitting machinery, steadily increasing the efficiency and broadening the scope of its products. This long and valuable experience assures continued leadership in the great new era of knitting that lies ahead.

Today our manufacturing capacity—for five years preempted almost entirely by war demands—is being reorganized to meet demands accumulated during the war period. Our volume of production will be increased to several times its prewar size. Already, previously unobtainable material is coming in. Complete reconversion, however, must necessarily be several months away.

Meanwhile, everything possible is being done to fill the great backlog of orders for machines and urgently needed improvement and maintenance parts. This work is planned so that the greatest quantity of what is most needed will be produced in the shortest time possible.

Temporarily, we cannot meet all demands promptly for attachments, machine changes and maintenance parts, especially those for some older types of machines, but we will satisfy such needs as rapidly as we can.

In the years to come, as in the past, we shall produce the types of machines which will meet not only your present demands but will also help you build a prosperous future.

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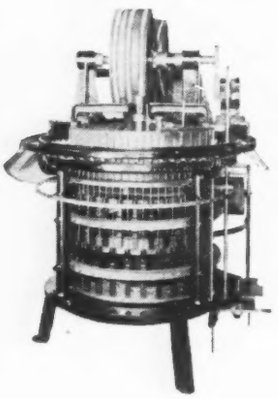
THE *Saylor*

CIRCULAR LOOM

—HIGH SPEED—EFFICIENT—



Low cost of upkeep and simplicity are two of the outstanding features of this loom.

We design and build these looms to suit your requirements.

A strictly uniform tension. Automatic stop on all threads.

Complete and adjustable tension of the warp threads while the loom is in motion.

Easy, smooth and light heddle action, which opens the threads so the shuttle may pass freely.

One operator can attend a large number of machines.

This loom is built with 2 or 4 shuttles, giving the highest production possible.

Material and workmanship throughout are the best. It is a high-class weaving machine.

A loom covering is the best and most desirable for hoses, cables, etc. Ask about "SAYLORTUBE."

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DYE-BATH ASSISTANT

Wetting Agent . . . Dyeing Assistant . . . Water Normalizer . . . Produces Brighter Shades . . . For All Fabrics.

Effective in hard water, acid or alkaline baths.

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- PROCESSING METHODS
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- MATERIALS HANDLING
- MANUFACTURING CONDITIONS
- CONTROLS FOR MACHINES SUPPLIES WASTE QUALITY MAINTENANCE
- ADMINISTRATIVE ROUTINES

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Consultants to the Textile Industry

company's plant on South Boulevard will be discontinued when the addition is completed. This plant has been leased to Campbell Fabrics Co., makers of specialty fabrics.

Plymouth Hosiery Mills, Inc., High Point, N. C., has begun construction of new mill at Russell and Willowbrook Sts., to be one-story, thoroughly modern type, including air-conditioning system. Erection contract has been let to C. S. McKenzie, High Point. Tyson T. Ferree, High Point, is architect.

Red Sox Hosiery Mill, Newton, N. C., is a newly established mill. It is owned by Ralph Fox, of Newton, bookkeeper for Newton Knitting Mill. Mr. Fox finds time to operate his own mill in addition to his other duties.

Rockwell Hosiery Mill, Salisbury, N. C., is adding a wing, 40 x 100 ft., to the mill and 50 knitting machines will be installed. A boiler room, 18 x 30 ft., is also being added.

Samalto Hosiery Mills, Perkasie, Pa., have plans maturing for new mill at Sellersville, Pa., reported to cost over $65,000 with equipment. Erection contract will be let soon.

Stratford Hosiery Corp., of Burlington, N. C., has inaugurated an expansion program to cost approximately $300,000, including building and equipment. Machinery to be installed will provide for knitting men's and children's hosiery. Plans for a later expansion include the installation of full-fashioned machines.

Summers Hosiery Mill, Inc., Salisbury, N. C., plans an expansion program to add about one-third more space. The plan calls for ten new 400-needle machines.

Victor Knitting Mills, Pasedena, Cal., awarded general contract to Earl R. Ballou, **Hemet,** Cal., for a one-story, 60 x 80 ft. mill in San Jacinto, Cal.

Vogt Knitting Mills, Reading, Pa., established by John H. Vogt, who for 18 years has been president and general manager of **Nolde & Horst Co., Reading, has** acquired ownership of Nolde & Horst branch mill at McMinnville, Tenn. Mr. Vogt has resigned from Nolde & Horst to devote his whole attention to his own company but he retains his financial interest.

Walker County Hosiery Mills, Lafayette, Ga., have leased the Pollock Bros. storehouse at Lyerly, Ga., and will establish a hosiery mill there. Looping machines are being installed.

Wilson Brothers, South Bend, Ind., have purchased the wool underwear mills of Wright's Underwear Co. at Troy and Cohoes, N. Y.

Dyeing and Finishing Plant News

Adams Piece Dye Works, Paterson, N. J., is expected to start operation. Raymond Adams, formerly secretary-treasurer and general manager of the Horn Piece Dye Works, Greenpoint, L. I., is president and general manager of the new concern.

Cherokee Finishing Co., Gaffney, S. C., has been incorporated with authorized capital of $50,000 to finish and process rayon, cotton and other textile products. Officers: R. W. Carr, president; J. Van Praagh, vice-president; Benjamin O. Johnson, secretary-treasurer.

Cranston Print Works, Cranston, R. I., has awarded general contract to Bowerman Bros., Providence, for a one-story addition for storage service.

Dempsey Bleachery & Dye Works, Providence R I., have been acquired by David Dwares, now operating Demar Wool Combing Co., Olneyville, and Slater Dye Works, Pawtucket. The new owner is reported planning to continue operations as heretofore. Building improvements will be made.

Lymansville Co., North Providence, R. I., plans one-story addition to dyehouse, to cost about $19,000, and will begin work soon.

Perfection Finishing Co., Inc., Boston, Mass., has been incorporated with capital of $800,000, to operate a dyeing and finishing mill. It is represented by Philip E. Tesorero, Boston, attorney.

Sayles Finishing Plants, Inc., Lincoln, R. I., have work in progress for a two story, 20 x 87 ft., addition. Henry Soule, Pawtucket, has the general contract. Steel and iron contract has been let to the Providence Steel & Iron Co., Providence.

Universal Dye Works, Philadelphia, Pa., has plans maturing for steel frame addition to mill and will begin work on superstructure soon.

Ready to Go... REGARDLESS OF RAIN

Thanks to AQUAROL

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The ultimate in water-repellent finishes

AQUAROL is now available for civilian use for weather proofing fabrics, giving the same protection to the fabrics as given to our Armed Forces.

Mill men know that to specify Aquarol is to assure high water-repellent efficiency for overcoatings, ski suits, sport jackets and slacks and all kinds of rainwear fabrics.

Aquarol will assure customer satisfaction and added sales value without increasing finishing costs.

Produced to meet government specifications during the war and now to meet the demand of the public.

ARKANSAS CO., INC.

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SAMPLE CARDING MACHINES
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In addition to these machines and machine parts, this acquisition includes facilities to recover and repair all Lombard rolls, the service being available immediately.

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Tidewater
RED CYPRESS

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Romeyn Beck Hough, author of "American Woods", says of Cypress "Its great durability, immunity from the attacks of parasites, and non-liability to great shrinking or warping make it one of our most valuable woods for all woodwork exposed to weather, for tank construction, cooperage, etc. Its value . . . is enhanced by its comparative freedom from coloring or flavoring ingredients".

Phillips A. Hayward, author of the volume on Wood in Chandler Cyclopedia, says that Cypress is "easy to work, available in large dimensions, and resistant to decay". It is also "resistant to changes in moisture, resistant to acids, and imparts neither color nor taste."

For a hundred industrial needs, TIDEWATER Red Cypress is the right answer. Write today for full details.

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NEWS ABOUT Men

Ralph T. Reed, president of American Express Co., New York, has been elected to the executive committee of the American Woolen Co., Inc. Mr. Reed succeeds the late John E. Rousmaniere.

Thurmond Chatham, chairman of the board of directors and former president of the Chatham Mfg. Co., Elkin, N. C., has been released from active service with the Naval Reserve after being in service for 3½ years. **Albert Butler** will remain as company president.

S. Mortimer Bloom recently resigned his position as president of Putnam Mills Corp., Putnam, Conn. No successor has been named yet to fill the vacancy. **Barney Bennett,** general manager of the firm, will continue in that capacity.

S. S. Walker was elected president and treasurer of the Virginia Underwear Corp., **Gordon Pannill,** vice president, and **W. E. Haynes,** secretary. Mr. Walker also was elected president and treasurer of the Bassett-Walker Knitting Co., Bassett, Va., at the annual meeting of this company, while **Gordon Pannill** was elected vice-president and **L. W. Wells,** secretary.

Harold Finkelstein, recently released from the army, has rejoined his own firm as partner of Jacob Finkelstein & Sons, Woonsocket, R. I.

I. A. Wyner, president of I. A. Wyner & Co., New York, who had previously served as treasurer of Woolknit Associates, has been named president of the latter group. Mr. Wyner, is also a vice-president of Shawmut Woolen Mills, Stoughton, Mass.

Harold E. Reed has resigned as assistant editor of TEXTILE WORLD to enter consulting work with headquarters in Mexico City, Mexico. His first service will be for the Atoyac Textil, S. A., group of mills in Mexico City and Pueblo, for which he will establish training courses and act as technical advisor.

Clarence Hutton, technical editor of TEXTILE WORLD previous to 1930, has resigned as publicity director of Davis & Furber Machine Co., North Andover, Mass. He will reside at 127 Prospect Ave., Wollaston, Mass.

Floyd W. Jefferson, Jr., has resumed his duties at Iselin-Jefferson Co. after 2½ years in the Navy. Mr. Jefferson is a partner in the company and will devote his attention to the various departments in the organization as well as the mills associated with the company.

J. P. Emile Collette, for many years an executive of Associated Textiles of Canada, Ltd., Louiseville, Que., has been named president. **Howard Lauler, C. A.,** who has been with the company since 1934 becomes the new vice president of the firm. **Louis Mindel,** who has been sales manager since 1940, after representing the company in England for several years, has been appointed assistant to the president in charge of merchandising.

Andrew B. Calhoun, formerly vice president and general manager, is now president of Equinox Mill, Anderson, S. C. He succeeds **Chas. A. Sweet,** retired.

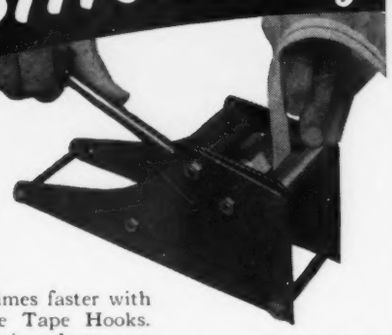
Raymond Curtis, formerly treasurer and general manager of Kenyon Piece Dye Works, Inc., Kenyon, R. I., has become president. **Frank Anziuino** was appointed treasurer.

E. F. King, prominent in the Canadian textile industry, was recently appointed president and general sales manager of Dominion Burlington Mills, Ltd., Montreal, Que.

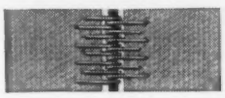
John F. Greene has been appointed general manager and **Frederick W. Webbley** has been appointed treasurer of Nonquitt Mills, New Bedford, Mass. Mr. Greene and Col. Webbley will succeed **P. L. Lamb** and **W. R. Hindle,** resigned. **Clifford H. Ashley** continues as superintendent.

Dr. Geo. M. Gantz, formerly with the Naval Research Laboratory in Washington, D. C., has been appointed by the Lonsdale Co., Providence, R. I., to head a newly established research labor-

10 TIMES FASTER THAN STITCHING!



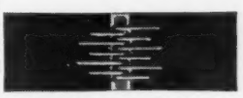
SPINDLE TAPE LACING EQUIPMENT



Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT

CAMACHINE 40-7
for inspecting winding, trimming and slitting of quilting materials
GET FACTS !
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CAMERON MACHINE COMPANY 61 POPLAR STREET, BROOKLYN 2, N. Y.

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To the Wearers of this BUTTON

Our Sincere GRATITUDE

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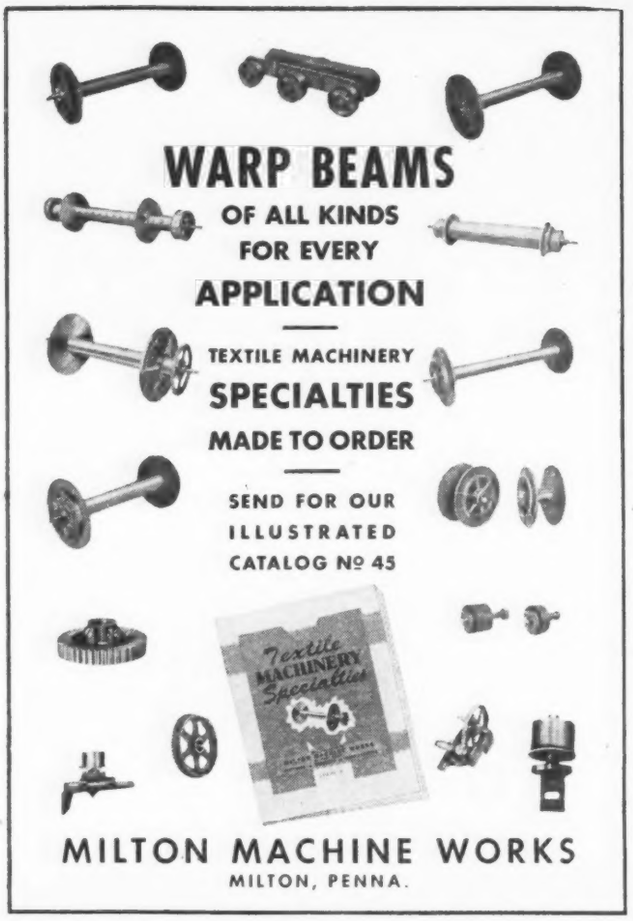
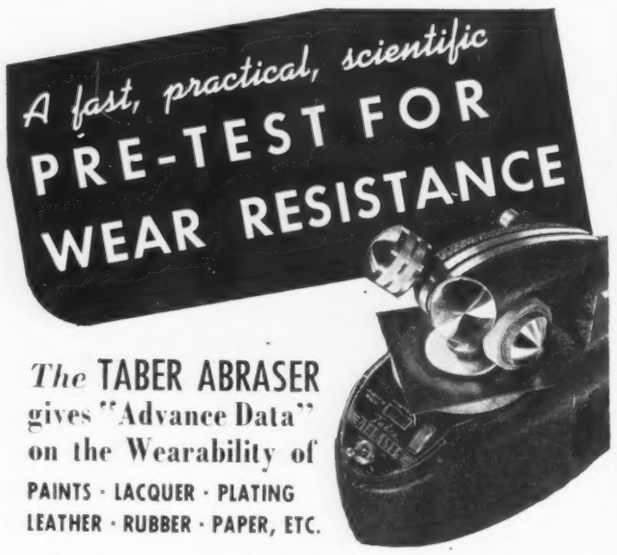
ROCK RIVER WOOLEN MILLS

Janesville, Wisconsin





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TABER INSTRUMENT CORPORATION
111 TW Goundry Street North Tonawanda, N. Y.

The Taber Test Proves What Wears Best!

atory which will be located at the Lincoln Bleachery & Dye Works, Lonsdale, R. I. This new laboratory will study spinning and weaving as well as dyeing, bleaching, and finishing.

Don S. Holt, vice-president of Travora Mfg. Co., Graham, N. C., recently out of the Navy, has assumed active management of the plant. **J. Harvey White,** president, will continue in an advisory capacity.

Warren L. Chaffin has been elected executive vice president and director of J. L. Stifel & Sons, Inc., Wheeling, W. Va.

John Edward Sadler has purchased an interest in the Dobson Hosiery Mill, Pulaski, Va., and will be active in the company after his return from the Navy.

Wallace E. Stoddard, vice president of Berkshire Fine Spinning Associates, Adams, Mass., will retire Feb. 1 after 51 years in the textile industry. He has been with the Adams concern for the last 39 years.

George R. Bridge, who has been assistant agent at Continental Mills, Lewiston, Me., for the last four years, has been named director of jobs and standardization for all divisions of Bates Mfg. Co. and will serve as assistant to **H. D. Ruhm, Jr.,** president.

Dr. Ernest B. Benger, who has been assistant general manager of the Technical Division, Rayon Department, of E. I. du Pont de Nemours & Co., Wilmington, Del., has been promoted to manager of the division. He succeeds **Maurice du Pont Lee.**

Arthur Crossley, former vice-president in charge of manufacturing for Wauregan Mills, has joined Callaway Mills, La Grange, Ga.

Hugo Hemmerich has been elected vice president of the Berkshire Knitting Mills, Reading, Pa. Mr. Hemmerich has been in charge of all Berkshire's manufacturing during the last 36 years.

Howard B. Schneidewind, on terminal leave from the Army, has resumed his duties as vice president and director of Bridgewater Woolen Co., Bridgewater, Vt., and North Billerica Co., Billerica, Mass.

William C. Miller has been elected treasurer of Industrial Rayon Corp., Cleveland, O. to succeed **D. S. Mallory,** who has retired. **George C. Miller, II,** has been named assistant secretary and assistant treasurer.

George W. Ewald has been elected to the newly-created position of executive vice president of Concordia-Gallia Corp., Philadelphia, Pa. Before entering the service, Mr. Ewald, who attained the grade of lieutenant-commander, was in charge of production and sales of the narrow fabric and throwing division of the company.

Thomas P. Mulligan, vice-president of Athol Mfg. Co., Athol, Mass., has been appointed sales manager.

S. Y. Austin, Jr., is now associated with Crompton-Shenandoah Co., Waynesboro, Va. A lieutenant commander in Naval Reserve, Mr. Austin was on active duty from April, 1942, until his discharge recently.

Charles B. Rupprecht, associated for the last 15 years with the print cloth department of J. P. Stevens & Co., Inc., New York, has retired from active business.

Sydney P. Munroe, Larchmont, N. Y., who has been associated with Wellington Sears Co., Inc., for a number of years, has joined Hesslein & Co., New York.

Emanuel J. Weil has resigned from Archer Hosiery Mills, Columbus, Ga., with which he has been associated for the last six years as vice president and director with headquarters in New York. He has been in charge of distribution.

George E. Spofford, for the last 18 years treasurer and general manager of the five mills in Maine which were controlled by the New England Public Service Corp. is retiring as of the date that the new owners, Coffin & Burr and the First of Boston Corp., take control He will stay with the new ownership in an advisory capacity.

Alex. M. Leslie was recently appointed treasurer and a director of Leach Textiles, Ltd., Huntingdon, Que. He was at one time vice president and secretary-treasurer of Textile Sales, Ltd., which owns and operates Textile Weavers, Ltd., Grand'Mere Que.

Ray Salmonsohn has been named vice president of Connecticut River Mills and Sunapee Mills, Inc., as well as full partner in Albeco Textiles. He will make his headquarters in New York and will be in charge of distribution and sales.

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Magic Spun
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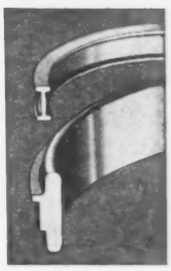

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Holders for all types of mules, frames, twisters and winders.

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Westbrook, Maine

Cotton yarns, single and ply
Cotton warps, single and ply
Colored yarns and warps
Spun rayon—yarns and warps
Seamless grain bags.

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TIME LIMIT SWITCH

. . . and you're set for the closest control of your machines or processes

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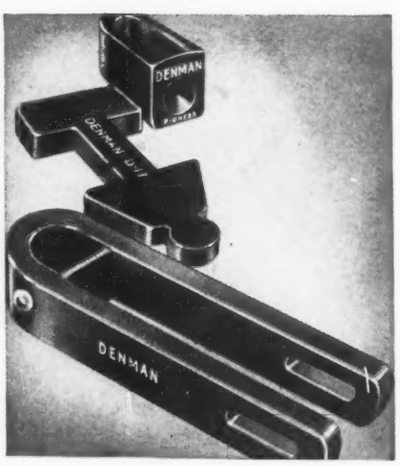

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E. W. S. Jasper, Inc., Elizabeth, N. J., Penn., N. Y. and N. J.
W. J. Westaway Co., Ltd., Hamilton & Montreal . . Canada
Geo. Thomas & Co., Manchester, Eng. . . European Agent

NEWS ABOUT MEN

Charles L. Lynn, who has been assistant supply officer in command, Naval Aviation Supply Depot, Philadelphia with rank of captain, has been elected assistant treasurer of American Woolen Co. He has been with American Woolen since 1923.

Howard J. Revell, superintendent of Glasgo Finishing Co. for the last 15 years, has resigned to become assistant general manager of Warren Print Works, Bondsville, Mass. **Russell Dimery**, who was with Pacific Mills for six years before entering the Army in 1941, has been released from service and has been appointed chief chemist of Glasgo Finishing Co., Glasgo, Conn.

Kenneth N. Merrill, recently discharged from the Army, has returned to William Whitman Co., Inc., New York, as manager of the yarn division.

H. C. Skelton is now general superintendent of the Uniontown, Ala., plant of California Cotton Mills Co. Mr. Skelton was with Appalachian Mills in various capacities for many years.

Paul Fabian, who recently resigned as plant manager at Uncas Finishing Co., Mechanicsville, R. I., has been named general manager of Greenwich Bleachery, East Greenwich, R. I.

Fred Allen, who for nearly 18 years has been with Hamilton Cotton Co., Ltd., Hamilton, Ontario, as general superintendent of its Hamilton and Trenton plants, and also as a director of the company, has resigned to accept appointment as manager of Carter Mills, Lincolnton, N. C.

Dr. E. B. Benger, manager of Du Pont's technical division has announced three promotions to the classification of "research associates", in recognition of outstanding scientific work. They are: **Dr. W. E. Roseveare,** Viscose Rayon Research Section Spruance plant, Richmond Va.; **Dr. E. F. Izard,** Pioneering Research Section, Yerkes plant, Buffalo, N. Y.; **Dr. E. V. Lewis,** Nylon Research Section, Wilmington, Del.

Henry M. Schiller, recently released as lieutenant colonel from active Army service, has joined S. Strook & Co., Inc., Newburgh, N. Y., as head of the purchasing department.

John P. Harrison, general manager of Dundee Mills, Inc., Griffin, Ga., has become superintendent of Clayson Mills, formerly Buffalo Mill, which Dundee purchased recently.

Edward O. Buhlmann, who has been contracting officer for woolen textiles in the Quartermaster Purchasing Office in New York, has joined the American Woolen Co.

George Asnip, late of the Army, has rejoined La France Industries as general manager of the Pendleton Mfg. Co., La France, S. C.

Audrey Hobbs has been appointed general manager of the Anchor Duck Mills, Rome, Ga.

Theodore J. McCauly, recently returned from the South Pacific, has been appointed production manager of North Oxford Garnetting Co., North Oxford, Mass.

A. Archie Finkelstein has resumed his position as general manager of Atlantic Knitting Co., Providence, R. I., being released from the Army where he had rank of lieutenant colonel.

Carl C. Dudley was recently appointed manager at Providence Braid Co., Pawtucket, R. I. He was formerly associated with Crown Mfg. Co.

John R. Sills has become personnel director of McCrary Hosiery Mills, Inc., Asheboro, N. C. He has been with the company for eight years in the knitting and payroll departments.

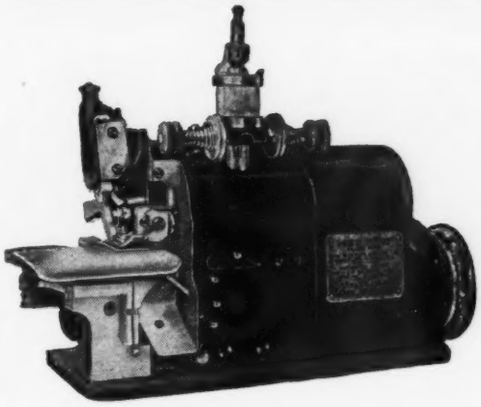
Talbot Rantoul, discharged from the Army Air Transport Command, has been appointed sales control and statistical analyst for Bigelow-Sanford Carpet Co., New York

Robert F. Bender has been named controller of Bigelow-Sanford Carpet Co., Thompsonville, Conn. He succeeds **Mark Dunnell,** now treasurer. Mr. Bender was formerly controller of John B. Stetson Co., and treasurer of Stetson Hats, Inc.

Robert G. Dort has been named manager of staple fiber and spun yarn sales for Celanese Corp. of America, New York. He has been with Celanese Corp. since 1925.

Wm. F. Bailey has become supervisor of personnel at Triangle Hosiery Mills, High Point, N. C. He has been a lieutenant colonel in the Army.

P. D'Alessandro, formerly with Better Fabrics Testing Bureau



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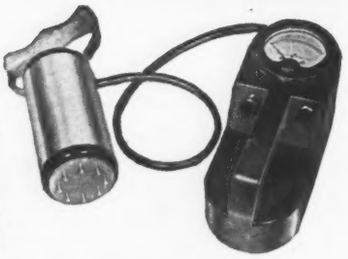

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Here is the all-purpose moisture testing instrument you have been waiting for.

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NOVELTY-YARNS
For
WEAVERS-KNITTERS

MONTGOMERY
WINDSOR LOCKS, CONN.
Designers and Spinners of Novelty Yarns

NEWS ABOUT MEN

and Macy's Bureau of Standards, has been appointed in charge of the textile testing laboratory for Deering Milliken & Co., Inc., New York.

William F. Odom who has been consultant and technologist for 3½ years in the finishing of textiles at the Jeffersonville QM Depot, is joining William L. Barrell Co., New York, as technical adviser in the finishing department.

Frederick H. Graichen, who was recently released as major from the Army, after three years overseas, has joined the American Woolen Co., Dept. 1, as stylist and salesman. In his new post he will style the products of Ayer Mill, Lawrence, Mass.

Francis P. Alter has returned to American Woolen Co., New York, after serving for four years in the Marine Corps and is with Dept. 7 (Puritan Mills). He was formerly in the blanket department. **Arthur Phair,** who has returned from four years with the Army in Europe, is in Dept. 10 (Globe Mills).

George J. Bienstock has resigned from Shetucket Worsted Mill, Inc., where he was stylist, to become general assistant to Herman W. Block, president of S. Stein & Co., New York. Mr. Bienstock will assume the duties of merchandiser and stylist and designer.

James H. Barnhardt has been released from the Army, after serving for three years and has returned to active connection with Barnhardt Mfg. Co., Charlotte, N. C., serving as assistant secretary, treasurer, and sales manager. He was a first lieutenant in the Army. He is also sales manager.

Clarence E. Stoutenbergh has been made general superintendent of the Lastex department of U. S. Rubber Co., Providence, R. I., and **L. Dexter Aldrich** general superintendent of the mechanical goods department. **William H. Howe,** second shift superintendent, and **Edward Carroll,** traffic manager, retiring from the staff, are succeeded by **Albert B. Wilkes** and **John A. McManus** respectively.

John J. Valter, manager of North Carolina Fabrics Corp., Yadkin, N. C., has resigned.

David Hausmann has resigned his position as stylist and salesman for the American Woolen Co. to join the board of directors of Stroud Textile Products, Ltd. New York.

Barney Bennett, for five years general manager of Putnam Mills Corp., Putnam, Conn., is retiring from active business.

Alexander H. Gardiner, has become sales manager at La France Industries, Philadelphia, Pa, succeeding **H. G. Mann,** who has resigned. Mr. Gardiner formerly was associated with Collins & Aikman Corp.

Thomas Hawes, assistant plant manager of Cluett, Peabody & Co., Grosvenor Dale, Conn., has joined Wauregan Mills, Wauregan, Conn., as agent.

J. C. Boyce, formerly superintendent of Mayfair Cotton Mills, Arcadia, S. C., has become superintendent of Clinton Cotton Mills and Lydia Cotton Mills, both at Clinton, S. C. He succeeds **F. D. Lockman, Sr.,** who resigned to become superintendent of Union-Buffalo Mills, Union, S. C.

Frederick T. Entwistle, assistant service superintendent at the Spruance unit of E. I. du Pont de Nemours & Co., Inc., Richmond, Va., has been appointed manufacturing superintendent of the Waynesboro, Va., unit.

George Wassman, superintendent of the Juniata, Pa., mill of Schwarzenbach Huber Co., has been placed in charge of all weaving operations for the company. He succeeds **A. B. Clepper** who resigns as of Apr. 1.

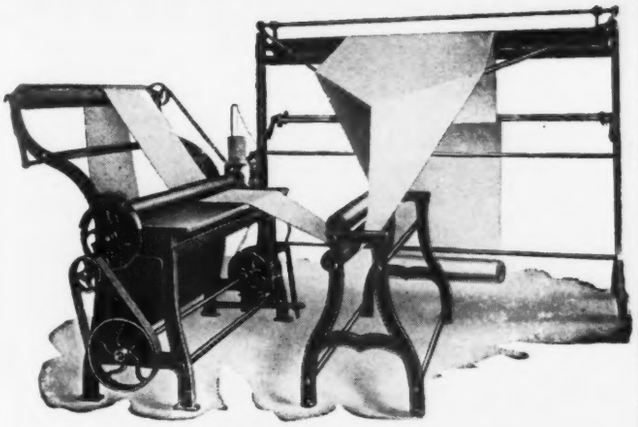
Lawrence Brennan has been named assistant superintendent of the Peace Dale, R. I., mill of M. T. Stevens & Sons Co., to succeed **Richard Clarenbach,** who becomes superintendent at the Franklin, N. H., plant.

Claude A. Bransford, formerly assistant superintendent of the Sawyer, Regan Co., Dalton, Mass., has been appointed superintendent to succeed **Hilton Crowther.**

R. E. Bond has resigned as superintendent of the Malone Woolen Mills of J. O. Ballard & Co., Malone, N. Y., to be-Wool Wear, Inc., Homer, N. Y. come general superintendent of

Milton D. Crawley has been promoted to general overseer of Mill No. 2, Granite Falls Mfg. Co., Granite Falls, N. C.

Merle Warren has been appointed superintendent of Baxter Woolen Mills, Somersworth, N.



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Complete color assortments

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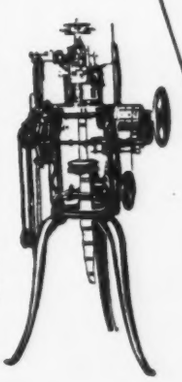
UP GOES PRODUCTION ➡ DOWN COMES OVERHEAD

WITH *BRINTON*
CIRCULAR KNITTING MACHINES



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GREENVILLE, S.C. FALL RIVER, MASS.

NEWS ABOUT MEN

H. He was formerly with Northfield Mills, Inc., Northfield, Vt.

Robert W. Dugan, formerly with Lima Woolen Mills, Lima, Ohio, has become superintendent of Pendleton Woolen Mills, Pendleton, Ore.

W. F. Christman, superintendent of the towel mill of Marshall Field & Co., Fieldale, Va., has resigned to join Sunspun Mfg. Co., Asheboro, N. C.

Patrick Baxter has become superintendent of American Textile Woolen Co., Sweetwater, Tenn. He formerly held a similar position with Hardwick Woolen Mills, Cleveland, Tenn.

Louis J. Gibbons, Jr., out of the Army, will rejoin Delta Finishing Co. and Summerdale Dyeing & Finishing Co., Philadelphia, Pa., as assistant to his father, **Louis J. Gibbons, Sr.**

W. L. Brightwell, formerly with Father George Mills, Sanford, N. C., is now superintendent of New City Mills, Newton, N. C. He succeeds **R. F. Redding.**

Earl Clifford has been named superintendent of Uncas Finishing Corp., Mechanicsville, Conn. He formerly was division superintendent of Utica-Willowvale Bleachery, Chadwicks, N. Y.

William W. Edwards, superintendent of the Franklin Mills of M. T. Stevens & Sons Co., North Andover, Mass., for the last 35 years, has resigned. His successor is **Richard Clarenback,** who was assistant superintendent of a company mill in Peacedale, **R. I.**

Harold Lewis has resigned as assistant superintendent of the No. 6 plant of Riverside & Dan River Cotton Mills, Danville, Va., and has become superintendent of Jennings Cotton Mills, Lumberton, N. C.

Henry C. Laponese was recently appointed superintendent of Amory Worsted Mills, Manchester, N. H., and **Joseph A. Neault** became overseer of spinning, winding, and twisting.

Norman W. McCall has been promoted to general overseer of carding and spinning at The Kendall Co., Waterce plant, Camden, S. C.

Milton D. Crawley has been promoted to general overseer of Mill No. 2, Granite Falls Mfg. Co., Granite Falls, N. C.; **Robert M. Tarrant** to personnel director; **Miss Ruby Bishop** to assistant personnel director; **Herschel Starnes** to first shift foreman; **Andrew W. Gaines** to second shift foreman; and **Glenn W. Smith** to third shift foreman.

Carlton Schulze was recently named superintendent of the Bradford Yarn Division of American Woolen Co's. Wood Mill, Lawrence, Mass. He fills the vacancy created by the promotion of **George Gahm** to assistant manager of the Wood Mill. Mr. Schulze was formerly superintendent of American Woolen Co's. Ayer Mill.

J. Ralph Clark will have charge of the card room of Louisville Textiles, Louisville, Ky.; **Clifford Ham,** the spinning and winding rooms; and **Andrew Becker,** the twisting, slashing and warping departments.

Max D. Thomason, released from active duty as captain with the Army, has returned to his former position with Cannon Mills, Kannapolis, N. C., as master mechanic.

John P. Gilmore, night superintendent and overseer of twisting at Goodyear Clearwater Mills, Rockmart, Ga., has retired.

C. F. Fitton recently rejoined Montreal Cottons Ltd., Valleyfield, Que., following his retirement as captain in the Canadian Army, and is now assistant superintendent of the Converting Division. Mr. Fitton joined Montreal Cottons Ltd., in 1932 as chief chemist, a position be held until joining the Army.

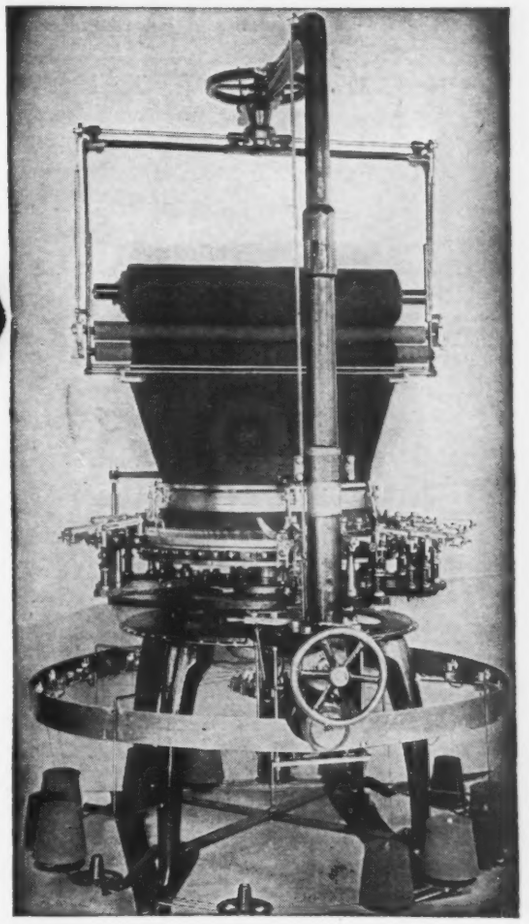
Pelham E. Smith who has been superintendent of finishing at the Riverside & Dan River Cotton Mills, Danville, Va., is now quality-control and research director of Marshall Field & Co., Spray, N. C.

W. R. Rogers, formerly superintendent of Hadley-Peoples Mfg. Co., Siler City, N. C., is now superintendent of St. Pauls Rayon Mills, St. Pauls, N. C.

Charles Jones has returned from the Army to Texas Textile Mills, McKinney, Texas, where he is now overseer of weaving, replacing **Inman Hurt,** who has resigned.

J. T. Thompson, formerly overseer of spinning at Oakland Mill, of The Kendall Co., Newberry, S. C., has resigned after 30 years of service with that company.

Single Head Spring NEEDLE Knitting Machine



PRODUCES 100 YARDS PER 8 Hr. DAY

The New S-1 Single Head Spring Needle Machine is especially designed for overcoating materials. At the same time, *any* fabric can be knit on it that is knit on the older type spring needle table!

Production is approximately 100 yards per 8 hour day, using 6 feeds.

Features: Electrical driven by V belt simplified motor drive . . . electrical yarnstop motion . . . and needle stop motion.

Install one of these machines today, and in a few hours after reaching the mill it will be ready for operation!

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BRAIDING MACHINERY for braiding

Elastic, Shoe and Corset Laces, Awning Braids, Lingerie Braids, Tapes, Fish Lines, Cords, and Special Braids.

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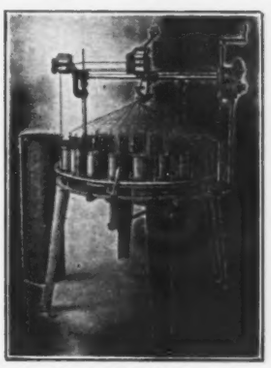

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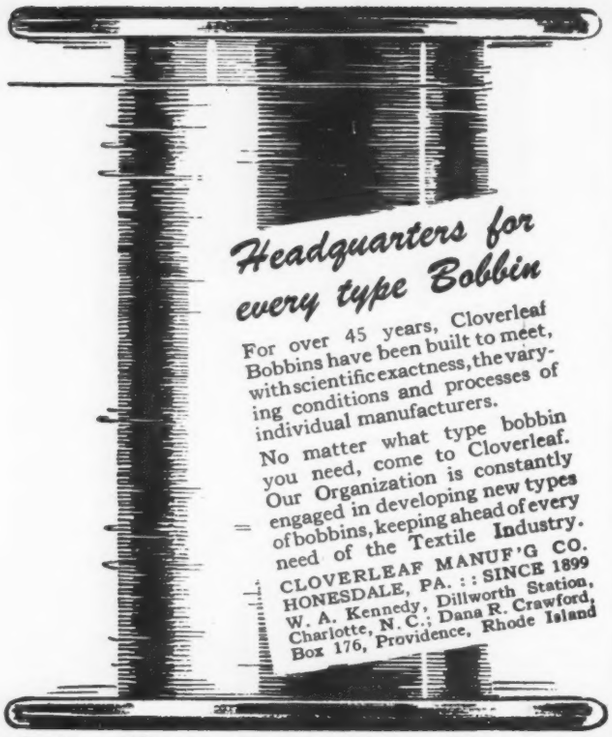
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Obituary

William S. Diamond, 81, president and founder of Victor Dye Works, Philadelphia, Pa., died Jan. 25. He was also a former partner in the firm of Bush & Diamond, manufacturers of Axminster rugs in Philadelphia.

Henry L. Tiffany, 83, founder and for many years president and treasurer of Kilburn Mill, New Bedford, Mass., died Jan. 7, in New Bedford, Mass.

William P. Underhill, 77, Chestnut Hill, Mass., and Wolfeboro, N. H., died Jan. 5 He was an official of L. C. Chase & Co. and associated with that company for nearly 50 years before his retirement in 1932.

W. Winslow Lasley, 91, of Burlington, N. C., former vice president of Holt Plaid Mill at Burlington which later became part of the Burlington Mills Corp., died recently.

Jacob May, 84, president of May Hosiery Mills, Nashville, Tenn., died recently. He was a native of Germany and came to the United States in 1882. He established the first hosiery mill in Tennessee, the Rock City Hosiery Mill, about 1897.

Thomas Jones Lutz, 91, founder of Lenoir Cotton Mills, Lenior, N. C., and former president of the Hudson Cotton Mills, died recently.

William L. Ricketts, 78, engaged for many years in textile manufacture as a partner in Ricketts & Shaw Woolen Co., Monson, Mass., until his retirement in 1932, died recently.

R. T. Persons, 74, president of Forsyth Cotton Mills, Forsyth, Ga., died recently.

Frank Goldberg, 66, president of Algodon Mfg. Co., Bessemer City, N. C., died recently.

J. P. Carl Weis, 79, of Lincoln, R. I., died Dec. 30. He was president and co-partner of Narrowtex Co. of Pawtucket, R. I., before his retirement.

John T. Woodside, 82, retired cotton manufacturer and an early leader in the textile industry in South Carolina, died Jan. 5, in Greenville, S. C.

Percy L. Boden, 53, Middle Haddam, Conn., president of Mohawk Mfg. Co., Middletown, died Jan. 3.

William A. Read, 56, died at his home in Utica, N. Y., Jan. 16. He was manager of the finishing department of the New York Mills, N. Y., branch of the A. D. Julliard Co. Before going to Utica about 18 years ago, he was a foreman at the Crompton Velvet & Corduroy Mill, Crompton, R. I.

Franklin C. Sutherland, 46, died Jan. 14, in Providence, R. I. He was traffic manager for U. S. Finishing Co.

Harry V. Burkey, 56, treasurer of the Burkey Underwear Co., Hamburg, Pa., died Jan. 21. He was associated with the underwear company for the last 37 years.

Roscoe L. Chase, 86, retired textile chemist and former instructor in textile chemistry, died Jan. 17, in Providence, R. I. He taught chemistry in the Philadelphia Textile School, and was associated at different times with Arnold Print Works, North Adams, Mass., U. S. Finishing Co., Pawtucket, R. I., and Apponaug Finishing Co., Apponaug, R. I.

James Webb Gardner, 35, vice president and general manager of Cleveland Cloth Mills, Shelby, N. C., of which his father, O. Max Gardner, is president, died Jan. 19.

John W. Lasell, an executive of Whitin Machine Works, Whitinsville, Mass., is now presumed to have been killed in action Dec. 1, 1943, his 46th birthday. Captain Lasell, a pilot in World War I, accepted a commission in the Air Forces intelligence service in 1942.

Philip D. Hoch, 76, for many years treasurer and a director of Deisher Knitting Mills, Kutztown, Pa., died recently.

W. C. Martin, retired Atlanta, Ga., capitalist, who for many years was associated with Exposition Mills, and later with a New York textile brokerage firm, died in Atlanta recently.

James Edward Maddox, 59, representative of Chadbourn Hosiery Mills, Inc., and formerly with Larkwood Hosiery Mills, died at Charlotte, N. C., recently.

Rowland N. MacKay, 71, long associated with the textile machinery industry who represen-

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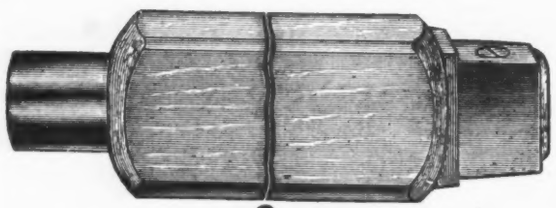

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ted Stafford Loom Corp., Readville, Mass., until it ceased independent operation, died recently.

Raymond Glover Slaton, 58, assistant treasurer of Brighton Mills, Inc., Shannon, Ga., died recently in Rome, Ga. He has been affiliated with Brighton Mills since their establishment in 1925.

Manning T. Twitty, 69, for the last 24 years with Hartsville Cotton Mills, the last 14 as treasurer, died at Hartsville, S. C., Jan. 17.

John H. Horsley, 67, formerly purchasing agent for West Point Mfg. Co., West Point, Ga., associated with the company for 47 years, who retired in June, died recently.

Franklin C. Sutherland, 46, for many years traffic manager for U. S. Finishing Co., Pawtucket, R. I., died on Jan. 14.

Nicholas D. Carpenter, formerly chemist for Union Bleachery, Greenville, S. C., major in the U. S. Army, missing in action since Aug. 14, 1944, has been declared dead by the War Department.

Morrill H. Hayman, for the last 17 years St. Louis branch manager for Stein, Hall & Co., Inc., New York, died at Webster Groves, Mo., recently.

Samuel Powell, 61, treasurer of Lonsdale Co., Lonsdale, R. I., died Dec. 18, in Providence, R. I. He was vice-president of the National Association of Cotton Manufacturers.

Rowland Hazard, 64, vice president and general manager of the Bristol Mfg. Co., Waterbury, Conn., died Dec. 21.

Richard Hutchinson, 75, former vice president and assistant treasurer of Dunson Mills, died recently in LaGrange, Ga.

Dr. Louis Cleveland Jones, 75, industrial chemist died Dec. 29 at Greenwich, Conn. He retired recently as director of the Stamford laboratories of the American Cyanamid Co., but had continued in a consulting capacity.

C. W. Gunter, cotton buyer for Textiles, Inc., which operates a chain of plants in Gaston County, N. C., died at Gastonia, N. C., Jan. 13.

Donigan D. Towers, 63, for the last 18 years manager of Anchor Duck Mills, Rome, Ga., died Jan. 2.

Frank Dearden, 63, of Warwick, R. I., died in England Dec. 30. He was for 11 years assistant superintendent of Lorraine Mfg. Co., Pawtucket, R. I.

Frank Mellor, 65, cloth inspector for Greenwich Mills from 1925 until he retired due to ill health last March, died in East Greenwich, R. I., recently.

G. G. Shaver, 54, an operating official of Halifax Cotton Mills, South Boston, Va., died Dec. 20.

W. C. George, 53, assistant superintendent of Peerless Mill, Cherryville, N. C., died recently.

Norman A. Lamoureux, foreman at the Sterling, Conn., branch of U. S. Finishing Co., died recently in Putnam, Conn.

Charles J. Thomas, 80, of Monson, Mass., retired superintendent of Whitall Carpet Mill, Palmer, Mass., died Jan. 5.

John J. Burke, 89, foreman in the spun silk department of Nonotuck Silk Co., later known as the Corticelli Silk Co., Northampton, Mass., until it went out of business in 1930, died recently.

Leon Osborn, 48, foreman of Livingston Worsted Mills of Holyoke, Mass., died Jan. 1, in Dudley, Mass.

Robert Ambach, 82, one-time foreman of Berkshire Woolen Co., Great Barrington, Mass., died Jan 9 at Housatonic, Mass.

Thomas Lee Moss, 67, for a number of years superintendent of carding at the former Aragon Baldwin Cotton Mills, Chester, S. C., and later holding a similar position with Monarch Mills, Lockhart, S. C., died recently.

A. F. Hedgpath, 73, superintendent of Easley Cotton Mills, Liberty, S. C., died Jan. 11.

Claude Raymond Dellinger, 55, machine shop superintendent for Unit No. 4, of Cannon Mills Co., died Dec. 13 in Kannapolis, N. C.

Ernest Victor Higgins, 50, Willimantic, Conn., general overseer of finishing of American Thread Co., died recently.

R. P. Kerley, 71, for many years assistant superintendent of Erwin Mills, Durham, N. C., who had retired, died recently.

Frank G. W. McKittrick, superintendent of Lowell Mills, died recently in Chelmsford, Mass.

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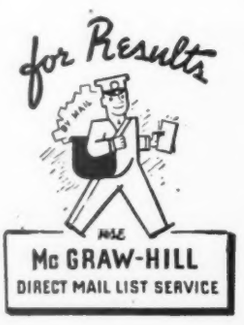

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FEBRUARY, 1946

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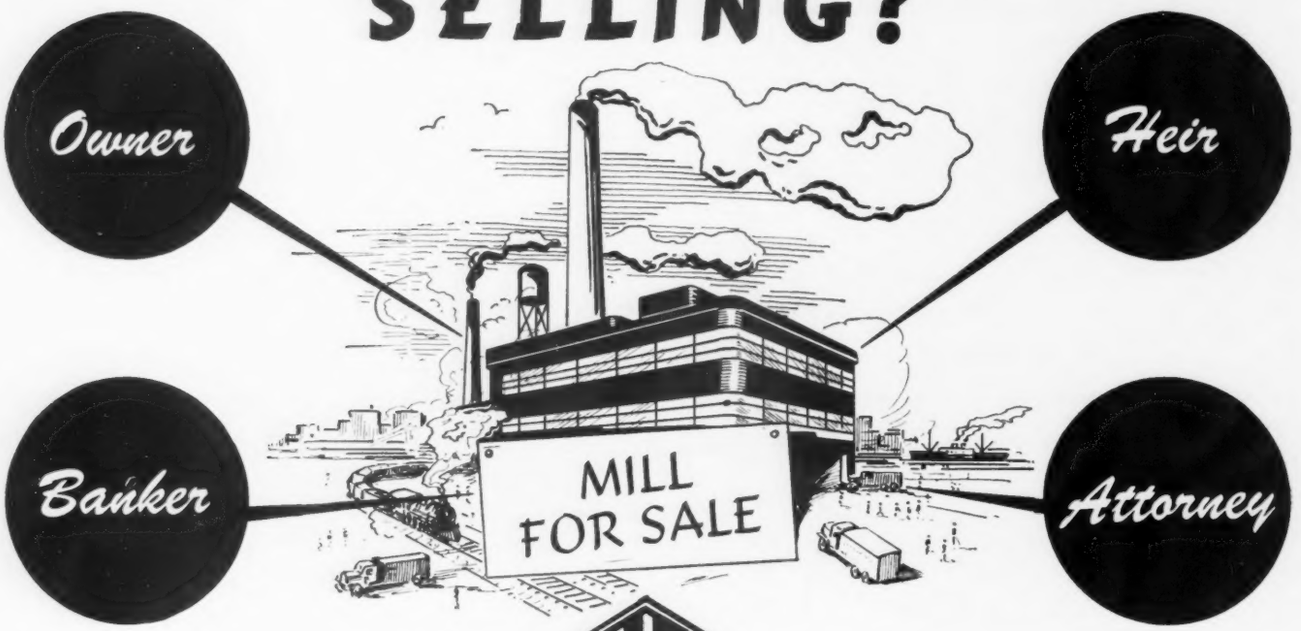

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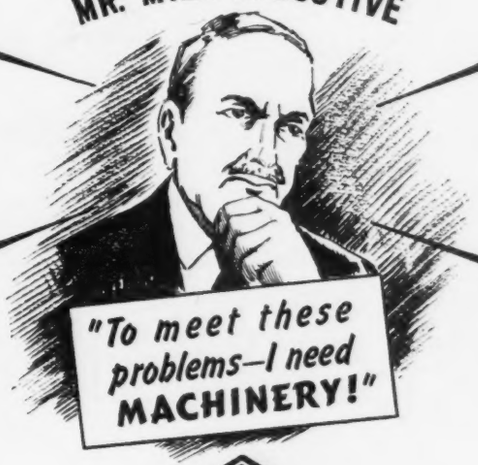

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200 Crompton & Knowles Automatic Looms 4 x 1 with 20 harness dobbies to weave 40" goods

70—Fletcher double deck spinners, 64 spindles each deck or 128 spindles to the machine. Each deck individually motor driven by a 3 HP motor. 7" center to center spacing. 5" Cork covered take up rollers.

15—Ribbon looms with dobbies, 15' 6" with double set of battens, one set for making Boucle fringe, the other set of battens for regular ribbon work.

10—96" looms, Crompton & Knowles, with 25 harness intermediate head.

24—Crompton & Knowles 4 x 4 48" Jacquard looms

30—Crompton & Knowles 2 x 2 48" Jacquard looms

Above looms complete with paperless beams, electric warp stop motion, pick counter, individually motor driven, extended bottom shafts for double lift Jacquards.

140—Crompton & Knowles 600 hook double lift Jacquard machines

200—#90 Universal quillers or coppers, with or without bunch builders belt driven or motor driven.
Foster winders #12 and #30

Sipp or Atwood winders to wind from skein to spool

Sipp or Eastwood warpers and creels

50—45" reed space, Draper automatic looms, 2 harness, roller motion, gooseneck cutters, Roper let-offs, positive feelers, worm take ups 23-75½" reed space Stafford automatic bobbin change looms, 2 harness roller top, ratchet take up, friction let-offs, positive feelers.

PATERSON
SILK MACHINERY EXCHANGE

24 Spruce St., Paterson, N. J. **Sherwood 2-1363-4-5-6**

"Consolidated"

NOW IN NEW AND LARGER QUARTERS

33-41 Bergen St., Paterson 2, N. J. Tel. ARmory 4-6540

For even greater service to the Textile Industry

For more than a quarter-century "Consolidated" has been the first thought in the minds of experienced textile operators needing equipment.

In our new quarters, we bring to your service an augmented staff, greatly enlarged floor space, and even greater facilities to help you.

This growth of "Consolidated" has been no accident. Your confidence in us has made it possible.

Now we appeal to you for your further cooperation.

The need not only for textile machines but for complete textile properties is now at its peak. Anything that can be utilized is in heavy demand . . . . AND "CONSOLIDATED" WILL BUY FOR COST WITHOUT DELAY.

Today we have many urgent inquiries which we are trying to fill. As the outstanding "source of supply" in the industry, textile men are flooding us with demands from all over the country.

There never was—and never will be again—such a market in which to sell your textile machinery and equipment quickly at top prices.

This is your opportunity to sell everything you can spare, to turn your idle assets into cash. SEND "CONSOLIDATED" YOUR LIST. Make it out NOW. Get it off to us TODAY.

WE BUY—*Do not delay. Send us your list* **TODAY**

WE SELL—*Supply your needs from next two pages...*

"Consolid

Equipment for the

TEXTILE INDUSTRIES

Rayon - Cotton - Silk - Wool

Also Equipment for Bleaching Dyeing, Finishing, Printing, Weaving

EXTRACTORS

6—V.V. & Tolhurst 54" & 60"; rubber & copper baskets.
8—V.V. Fletcher & Tolhurst 40-48", copper lined.
10—Tolhurst, American Laundry, Bock & Troy 14'-42", copper baskets.
2—48" Raw Stock Extractors.
1—Hercules 30" Open Top Extractor.
1—Gessner 72" Vacuum Extractor.
1—Morrison Roll Extractor.

SCOURING & DYEING

3—Sargent & Lorimer 2&3 bowl scourers.
6—Klauder-Weldon Skein Dyeing Machines.
1—Obermaier Yarn Dyeing Machine.
1—Geyser Type Skein Dyeing machine.
9—Franklin Cast Iron Pkge. Dyers—6-600#.
2—Haveg Totally enclosed dye becks.
1—Sargent Wool Dyer.
5—American Laundry & Zephyr 2 & 3 pocket rotary dyers.
1—12-string dyeing machine.
3—Giles Skein Dyers, 28 & 60 sticks.
5—copper dye tubs, 3'-20' lg.
3—K&W monel lined dyers, hoist type.

WATER SOFTENERS

1—Permutit Water Softener, 103" lg. 63" wd.
2—10x10 Vertical Softeners, Zeolite.
3—Pressure Sand Filters, 8' dia. x 20' long, complete.

GARNETTS—FULLING MILLS

3—James Smith 3-cylinder Garnetts.
1—P & S Single Cylinder 20x60" Garnett.
1—P & S 2-cylinder 20"x60" Garnett.
2—James Hunter #10 Fulling Mills.

DRYERS

3—National & P & S Loop Dryers, 30-65' long.
1—P & S 72" Raw Stock Dryer, automatic feed.
3—Sargent & Hunter Wool Carbonizers.
1—Phila. Raw Stock Dryer, 48" automatic feeder.
4—Truck Dryers, 1 & 2 trucks.
1—Pin Tenter Dryer, 64" wide.
6—Proctor & Schwartz Yarn Dryers.
1—Multipass Airlay Dryer.
1—V.V. 5-Tier Net Dryer.
2—Heathcote and Kenyon Cloth Dryers.
1—Proctor & Schwartz Hosiery Dryer.
1—Riggs & Lombard Cloth Dryer.
1—Sargent Wool Dryer. 1—P & S Apron Dryer.
1—National Loop Dryer, 96".
1—P & S Roller type Festoon Dryer.
1—P & S Pin Dryer, 84" wide.

NAPPERS

2—D & F single acting Nappers, 60 & 84".
3—Gessner & Woonsocket double acting Nappers, 60", 84" & 90".

TENTER FRAMES

1—Textile Fin. Mach., 90'x50" Tenter.
1—W & J 80'x50" Swing Tenter.
1—Heathcote Pin Tenter.

PALMER QUETCHES & TENTERS

2—V.V. Palmers, 60" & 72".
3—Morrison & V.V. 50", 60" & 72" Palmer Quetches.
1—Butterworth 80" Palmer.
2—V.V. & General Machine 60" Palmerettes.
1—2-roll B.B. Dye Padder, 64".

Centrifugal Extractor

PADDERS, MANGLES, QUETCHES

5—Textile & Butterworth 2-Roll Pad, 50", 62", 90".
1—Butterworth 2-Roll 80" Padder.
4—Butterworth 50" 2-Roll Starch Mangles.
1—James Hunter 50" Water Mangle.
5—Butterworth & Morrison 2 & 3-Roll Quetches, 50-72".

BUTTON BREAKERS

3—Morrison & V.V. Button Breakers, 50-72", brass rolls.

BATCHERS—REAMERS

4—Van Vlaanderen 50" & 60" Beamers.
9—Batchers, 48"-72".

COATING MACHINES

Plastic and rubber coaters, 50"-72".

BRUSHING MACHINES

2—P & W Cloth Brushers, 72" & 100".

FLAT FOLDERS & DOUBLERS

1—E & Hall Flat Folders, 42"-60" with motors.
3—P & W & Windle 46"-60" Doubling, Reeling & Measuring.
1—96" Doubling & Folding Machine.

SEWING MACHINES

5—Morrow 60ABB & 60D3B on stands and tracks.
3—Union Special and Singers.

SLASHERS—DECATERS—DRY CANS

3—Saco-Lowell-Cotton Slashers.
1—P & W 72" Decater.
355—Dry Cans, 50" to 112" face, 23" to 84" dia.

WASHERS

1—Continuous 60" Boil-Off Machine, steel tanks.
1—Van Vlaanderen 60" Open Washer.
2—Open Washers, 5 & 8 compartments, 50" face.
1—3-Compartment Monel Rotary Washer.
1—60" Open Washer.

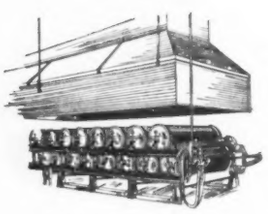
1—S&B THREE IRON CYLINDER GARNETT, 60" X 30".
1—V.V. 3-ROLL 62" CALENDAR.
1—P&S 8-PASS PIN DRYER, 84".

CALENDERS

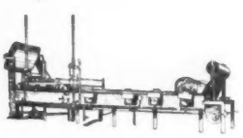
2—V.V. Ball Bearing Calenders, 50" & 60".
6—V.V. Butterworth & Textile, 3, 6 & 7-Roll Hydraulic Calenders, 80".
3—Butterworth & Perkins 40", 54" & 80" 3-Bowl Schreiners.
2—54" and 65" Embossers.
1—Textile Fin. 3-Roll Narrow Friction Calender.
1—K & G 50" 2-Roll Embosser.

SHEARS

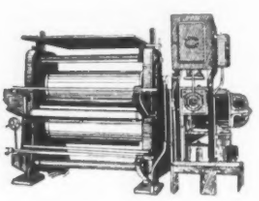
3—P & W 2-Blade Shears, 60" & 66½", complete with lint saving device and brushes.



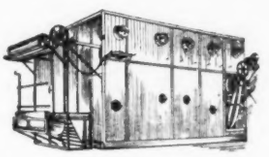
Drying Cans



Continuous Boil-off



Calender



Dryer

...ated

Leadership in the Textile Industry for more than a Quarter Century

AMERICA'S BEST BUYS IN USED MACHINERY

DYE BECKS—DYE JIGS

1—Butterworth Scouring Jig.
12—Morrison & V.V. 6' to 9' Dye Becks, stainless steel and wood tubs.
4—Morrison Dye Jigs, 50", S.S.

PRINTING MACHINES

4—R. B. & F. 1-10 color Print Machines, 40"-60".
1—V.V. 10-color Ribbon Print Machine.

TUBERS

5—Tubing & Measuring Machines, 50"-60".
1—Hermas 60" Measuring Machine with Motor.
3—New 60" Beamers.
2—C & M 72" Inspecting Machines.

WEAVING MACHINES

24—C & K 92" automatic looms.
13—C & K 82" automatic looms.
10—Draper 79" automatic looms.
52—C & K 52" automatic looms.
24—C & K 4x4 Automatic Tapestry Looms, 64".
30—72" Jacquard Looms, C & K.

KNITTING MACHINES

150—1" to 21" Circular Knitting Machines.
4—Wildman 23" Ribbers.
2—Grosser Knitting Machines.

PRINT MACHINE & EQUIPMENT

2—BTA & BTS Motors, 25, 35 & 50 horsepower. Star gears, mandrels, copper pans & doctor blades.
1—Franklin 3-Color 45" Print Machine. Complete with Jack, and 8 Copper Rolls.

PREPARATORY MACHINES

2—Sargent & C & M Burr Pickers.
2—30" Rag Pickers.
1—40" Kitson Pickers.
1—40" Mixing Picker.
2—Saco Lowell Condensers.
2—Saco Lowell Vertical Openers.
4—Pangborn Dust Collectors.
1—Conical Duster with dust blower.
1—Sargent Cotton Picker.
1—Wool Opener.

The above lists describe only part of our stock. We will cheerfully answer all inquiries. Correspondence invited.

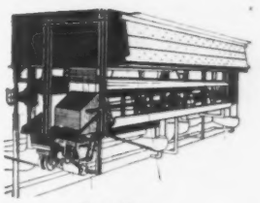
CARDING MACHINES

14—Sets D&F Wool Waste Cards, 48" x 48".
3—Sets D&F Woolen Cards, 48" x 48".
1—Woolen Card, 49" x 60" diameter.
3—Sets D&F Worsted Cards, 60"x54".
2—Sets D&F Worsted Cards, 60"x48".
2—Sets D&F Worsted Cards, 54"x54".
2—Furbush Worsted Cards, 48"x48".
6—Sargent, Bramwell & Harwood Feeds.
1—Barker Triple Rub 3-back condenser.
16—Whitin D-2 Combers.
8—Hetherington Silver & Ribbon Lap Machines.
2—5-cylinder 48"x48" Shoddy Cards, equipped with Bramwell Feeds and metallic breasts.
3—Bramwell 60" Card Feeds.

Carding Machine

AGERS—KETTLES

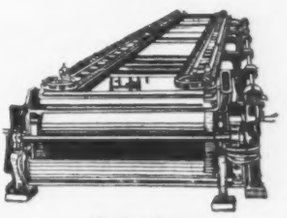
2—Butterworth Cast Iron Agers, 18' & 30' lg., 50-60" wide.
4—Textile Copper Steam Jacketed Color Kettles, tilting, agitated. 40-150 gallons.



Dye Box

SPINNING & YARN MACHINES

52—Whitin & D&F Spinners 240-252 spindles 2"-3½" gauge, band driven.
1—D&F Wool Spinner, 4½" gauge.
36—Deliveries H&B Drawing Frames, 12" coilers.
1—J&B 336-spindle Mule.
6—Platt Worsted Mules.
1—Sipp Double Deck Winder.
1—P-S Ring Twister, 5" band drive.
3—Fletcher Double Deck Winder.
2—Foster #101 Cone Winders.
12—Universal #50 & #90 Winders.
8—Atwood 50-B Spinners.
2—Sipp 72" Warpers.
3—Whitin & Atwood Skein Reelers.
4—Jack Spoolers, complete with creels.
7—H&B Speeders, 5" gauge.
2—Foster #12 Winders.
1—D&F 200-spindle Woolen Twister.



Tenter Frame

MISCELLANEOUS

Sewing machines, pleaters, folders, air compressors, wideners, searing machines, pumps, tanks, motors, spindles, bobbins, spools, gears, etc.

For your own convenience kindly send your inquiries to our Textile Division.

THE KEY TO SAVING TIME AND MONEY

FOR OVER A QUARTER CENTURY ★ A SYMBOL OF CONFIDENCE ★

CONSOLIDATED PRODUCTS COMPANY, INC.

Address All Textile Inquiries to

TEXTILE DIVISION, PATERSON 2, N. J.

33-41 BERGEN ST. **TEL. ARmory 4-6540**

CABLE ADDRESS: EQUIPMENT, NEW YORK
NEW YORK SALES OFFICE—15 PARK ROW—NEW YORK 7, N. Y.

Attention! Mill Executives

IN the last two years, a number of mill owners have found it desirable to sell their companies, or stock in their companies, in order to take advantage of capital gain taxes.

WE have been factors in these operations, and have purchased properties, confidentially, and have arranged for the continuance of the business, along lines that follow the wishes of the original owners.

THESE transactions have been handled to the entire satisfaction of all parties involved, so much so, that we have received letters from principals and their attorneys, congratulating us on the manner in which they have been handled.

IN the event you might be interested, we would appreciate it if you would contact us, or have your attorneys or bankers approach us, with the assurance that any negotiations will be held in strictest confidence.

REMEMBER
Republic Textile
EQUIPMENT COMPANY
40 WORTH STREET NEW YORK CITY
Purchase and Sale of Used Machinery
REFINANCING • APPRAISALS • PURCHASE • SALE • LIQUIDATION OF MILL PROPERTIES

EXCELLENT TEXTILE EQUIPMENT

SPECIAL OFFERING

COMPLETE RAYON FINISHING PLANT

2—Van Vlaanderen 50" Stainless Steel Tensionless Dye Jiggs, Motor Driven.
1—Butterworth 50" Stainless Steel Dye Jigg, Motor Driven.
2—Textile 54" Dye Jiggs, stone-lined, Motor Driven.
1—Textile Stainless Steel Can Dryer, 6 stainless Steel Cans 27" dia. 50" face, Reeves Variable Speed Transmission.
1—Palmer Finishing machine, 66", Staybolted Cylinder, 52" dia. small cylinder 15" dia., with Blanket, Motor Driven.
1—Van Vlaanderen 54", 2-roll Quetsch Ball Bearing, rubber-covered Rolls, Copper Steam Heated Trough.
1—54" Suction Extractor, Slotted Brass Tube and Nash Vacuum Pump.
1—Butterworth 64" Tenter Frame, 30' long, Top Opening Clips, complete with Reeves Variable Speed Transmission.
1—Gessner 70" Semi-Decater, 30" dia, cylinder, with Blanket and Vacuum Pump.
1—Butterworth 3-roll Finishing Calender, 60" wide, 20" diameter roll, Motor Driven.
1—56" Examining and Measuring machine.
1—Complete set Butterworth Dry Cans, horizontal design, Reeves Drive with 5 HP, DC Motor, Bucket Type, Removable Journals, 1 copper, balance tinned steel, 20 Cans, 108" face x 23" dia.
1—National Loop Dryer, 24' long, 11' high, 84" wide, complete Drive and Traps, Airfin Heater, Revolving Sticks, Drive, Motors.
2—Morrison 50" Stainless Steel Dye Jiggs, Stainless Steel Tilting Expanders, Stainless Steel Immersion Rolls, Rubber Beam Rolls, Stainless Steel Steam Heating Coils, V-belt Drive, A. C. Motor.

SPECIAL

140—40" Looms, 45½ reed space, Worm take-up, Barlett let-off, Double bank underslung Stop Motion, takes 7⅜" bobbin up to 8" bobbin, 18" Beam Heads, Automatic Bobbin Change, 168 picks per minute, ½ HP Motor, 220 volts, 60 cycle, 3 phase, Single Filling Fork, Roller tops for 2 harness, Shuttle—15¼ x 1⅜ x 1¾.

Spinning Frames

#5 —11 Spools, 264 spindles, D & F, 2" gauge.
#2 —15 Spools, 300 spindles, D & F, 2¼" gauge.
#3 —15 Spools, 300 spindles, D & F, 2½" gauge.
#4 —12 Spools, 360 spindles, Johnson & Bassett, 2¼" gauge.
#12—11 Spools, 330 spindles, Joohnson & Bassett, 2¼" gauge.
6—11 Spools, 264 spindles, D & F, 2" gauge.
7—11 Spools, 264 spindles, D & F, 2" gauge.
8—12 Spools, 360 spindles, D & F, 2¼" gauge.
9—12 Spools, 360 spindles, D & F, 2¼" gauge.
#10—15 Spools, 360 spindles, D & F, 2¼" gauge.

120—CIRCULAR RIB KNITTING MACHINES 10" to 18", 8 feed, 10 cut to 13 cut.

SPECIAL OFFERING

WOOL SPINNING EQUIPMENT

Card Room

2—D & F Twisters, 3½ gauge, 80 ends per machine.
2—Norsworthy Reelers, 40 end per machine.
3—D & F Spoolers, 40 end per machine.
1—Foster Cone Winder, 80 ends.
1—Dodge Shoddy Picker, 18" wide, Smth & Furbush.
1—Fearnaught Picker, 48", with feed.
1—Karch Mixing Picker, 32".
1—Atlas Picker, 48", Curtis & Marble Machine Co.
1—Duster.
2—Smith & Furbush 60" Garnetts, Metallic Breast 14-16 wire.

Wool Carding

#1—48"/48, 60 ends, D & F, wood cylinder.
#2—48"/48, 40 ends, D & F, wood cylinder.
#3—48"/48, 60 ends, Jas. Smith, wood cylinder.
#4—60"/48, 60 ends, Furbush with Thornton Finisher, wood cylinder.
#5—48"/48, 48 ends, D & F, wood cylinder.
#6—48"/48, 48 ends, D & F, wood cylinder.
#7—48"/48, 48 ends, D & F, wood cylinder.
#8—60"/48, 80 ends, Furbush with Thorton Finisher, wood cylinder.
#9—48"/48, 48 ends, D & F, wood cylinder.
#10—48"/48, 60 ends, D & F, wood cylinder.

REMEMBER
★ ★ ★ ★
Republic Textile
EQUIPMENT COMPANY
40 WORTH STREET NEW YORK CITY
Purchase and Sale of Used Machinery
REFINANCING • APPRAISALS • PURCHASE • SALE • LIQUIDATION OF MILL PROPERTIES

READY TO GO TO WORK—

Partial List

Dyeing & Finishing

2—BUTTON BREAKERS, wood rolls, 50"

1—CURTIS & MARBLE VERTICAL BRUSH, ball bearing rolls, 62"

5—BRUSHING MACHINES, 48" to 100"

1—McCREERY BRUSH, 2 roll, 54"

3—CALENDERS, 5 roll, 39" to 50"

1—CALENDER, 6 roll, 80"

2—CALENDERS, 3 roll, 48" & 52"

1—CALENDER, FRICTION, 3 roll, 42"

2—CALENDERS, HYDRAULIC, 7 roll, 80"

1—CALENDER, 3 roll, 20" used on narrow fabric.

1—CALENDER, EMBOSSING, 50"

1—CAN DRYER, VERTICAL, 36 cans, 144" wide

1—CAN DRYER, HORIZONTAL, 20 cans, 108" wide

1—DEWING & DAMPENING MACHINE, 63"

2—DECATURS, WITH VACUUM PUMPS, 72"

7—DOUBLING, FOLDING & MEASURING UNITS, 40" to 60"

1—BACKWASHER DRYER, 9 cylinder, with 3 fans

1—PIN TENTED DRYER, 10 yard, with housing, blower

1—LOOP DRYER, folder takeoff, 2 fans, 50"

1—COMBINATION KNIT GOODS DRUM DRYER & CARBONIZING MACHINE

1—DRYER, CLOTH & BLANKET, 80"

2—DRY TUBES & HEADS, RAYON, with aluminum baskets

1—SKEIN TRUCK DRYER FOR 2 TRUCKS

2—DRYERS, RAW STOCK, with hopper feed & housing, 350 lb. capacity

3—DYEING UNITS, RAW STOCK, 350, 500 & 1000 lb. capacity.

WE BUY

Single Units—

—Complete Plants

Send us your List today

8—DYEING UNITS, SKEIN, various types

15—EXTRACTORS, VARIOUS TYPES, 30" to 60" baskets

5—FOLDERS, CLOTH, 36" to 50", 1 yd. to 1½ yd. folds

4—FULLING MILLS, DOUBLE COMPARTMENT

1—PR. GUIDERS, with stands, 72"

6—JIGGS, stainless steel, 40", 50", 60"

6—MANGLES, 3 roll, 42", 54", 66"

1—MEASURING MACHINE, with motor & clock, 80"

15—NAPPERS, 20 roll knit goods, 24 roll double acting, 20 roll cotton, 80" & 90"

4—NAPPERS, McCREERY, knit goods, 10 roll

4—NAPPERS, double acting, 36 roll, 56" to 90"

1—NAPPER, single acting, 14 roll, 80"

1—PALMERETTE, complete with blanket, 60"

5—PRESSES, ROTARY STEAM, 66½"

1—QUETCH, 3 roll, 50"

1—QUETCH, 2 roll, 80"

1—SCUTCHER, vertical, 54"

13—SHEARS, SINGLE & DOUBLE BLADE, 40", 60", 66", & 80" wide cotton & woolen types

1—TENTER FRAME, PIN, 111' long, 255" wide

2—TENTER FRAMES, CLAMP, 30' long 58" & 64" wide

5—TUBING MACHINES, 50", 66", 70", 80"

1—WASHER, HAMMER, 6'

1—BACKWASHER, revolving creel, 2 bowl

SPINNING & WEAVING

4—BALING PRESSES, various types

1—BOBBIN CLEANER, ROVING, for 8" x 4" & 10" x 5" bobbins

1—BREAST, SMITH, 3 workers, 3 strippers, 16" x 48"

2—CARDS, SHODDY, double cylinder, 48" x 60"

1—CARD, COTTON SHODDY FINISHER, 49" x 50"

3—SETS CARDS, WORSTED, 2 cylinders, 48" x 48"

1—SET CARDS, WOOLEN, 3 cylinder, 60" x 48"

3—SETS CARDS, WOOLEN, 3 cylinder, 48" x 48"

10—COMBERS, 10" Coilers, 10½" Lap

24—COMBERS, 8 laps and up, 11⅝" width

4—CONDENSERS, RING RUBB, 48"

2—CONDENSERS, RING RUBB, 60" Cards

1—CONDITIONER, YARN

1—CONVEYOR, COTTON, motor controls & drives

1—CRUSHER, BURR, 7 roll, 28" long

48—DOUBLE INDEX DOBBIES, 20 harness, ⅜" gauge

1—DRAW BOX, 2 spindle

3—DRAWING FRAMES, 6 deliveries each, 12" coilers

2—DRAWING-IN MACHINES, stationary, for twine harness

1—DUSTER, RAG, 48" intermittent

3—FEEDS, CARD, APPERLY, for 60" Cards

2—FEED BOXES, BRAMWELL, 60"

2—FEED BOXES, BRAMWELL, 48"

1—FEED BOX, 72"

Liquidations
Appraisals

NORMAN M.
2568 PARK AVENUE

Large Selection of REBUILT *and* USED TEXTILE MACHINERY

6—FEEDS, INTERMEDIATE CAMEL BACK, 60" Cards

2—GARNETS, single cylinder, 48"

2—GARNETS, 4 cylinder, 60" x 30"

5—GILL BOXES, double can, double cam

6—INTERMEDIATES, 9" x 4½", 84 & 114 spindle

2—LAP MACHINES, RIBBON, 10½"

2—LAP MACHINES, SLIVER, 9¾" & 9" laps

52—LOOMS, HIGH SPEED SHUTTLELESS, for Elastic Webbs, tapes, etc.

63—LOOMS, AUTOMATIC, model "E" Lacey Tops, 30"

2—LOOMS, STATIONERY WIRE, 12/4

16—LOOMS, model "E", 43½"

6—LOOMS, C&K, 4 x 4, Woolen, motor driven, 92"

6—LOOMS, C&K, 4 x 4, Woolen, belt driven, 92"

24—LOOMS, STAFFORD, shuttle changing, motor driven, 56"

47—LOOMS, C&K, automatic, 4 x 1, motor driven, 45"

1—MULE, D&F, 300 spindle, 2¼" gauge

1—MULE, J&B, 360 spindle, 2¼" gauge

2—MULES, D&F, 240 spindle, 2" gauge

1—PICKER, MIXING, with Bates Feed, 36"

1—PICKER, BURR, double cylinder, C&M PARKHURST, 48" x 40" with Bramwell 48" Feed

1—PICKER, C&M, BURR, with Bramwell metallic knotwood feed, 24" x 24"

1—PICKER, WASTE, FRANKE, with feed table & motor, 22" x 30"

1—QUILLER, 378 spindle, chain, 2½" gauge, 8" bobbin

4—QUILLERS, CHAIN, 378 spindle, 2¼" gauge

1—REELER, SKEIN, motor "V" belt drive, 54"

1—SHREDDER, CLARK, with feed table, 40" x 24"

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8—Sets Cards, 48x48, 3 cylinders Rubb Condensers.

2—Sets Cards, 60x48, 3 cylinders Rubb Condensers.

1—Fearnaught Picker, 48" with Bramwell Feed.

1—Atlas Picker, 48" with Bramwell Feed.

1—Mixing Picker, 32" with Bramwell Feed.

1—Shoddy Picker, 18" with Feed.

2—Garnetts, 60" Double Cylinder units.

Miscellaneous units i. e., Dusters, parts, etc.

1—REEL, SKEIN, 50 spindle

4—SLUBBERS, 76 spindle, 9" x 4½"

2—SLUBBERS, 68 spindle, 11" x 5¼"

2—SLUBBERS, 114 spindles, hi-draft system, 10" x 5"

3—SPEEDERS, 160 & 144 spindle, 8" x 3½"

10—SPINNING FRAMES, TAPE DRIVE, 216 spindle, 3" gauge

9—SPINNING FRAMES, 196, 204, 252 spindles, 3" gauge, 2" ring

6—SPINNING FRAMES, 204 spindle, 3" gauge, 2" ring

2—SPINNING FRAMES, 252 SPINDLE, 3" gauge, 1⅜" ring

4—SPOOLERS, WARP COMPRESSOR, 60 ends, 48"

10—SPOOLERS, 120 spindle, 5" gauge, 6" Spool

6—SPOOLERS, BACK WINDING, 48 ends, 40" Spool

1—STRIPPER, VACUUM CARD

5—TWISTERS, NOVELTY, 76, 84 & 120 spindles, 2½ & 3½" gauge

1—TWISTER, 192 spindle, 2¼" ring

1—TWISTER, 128 spindle, 2" ring, 3" gauge

1—TWISTER, 120 spindle, 3¾" gauge, 2½" ring

4—WARPERS, ENTWISTLE, 54"

2—WARPERS, DRAPER, 54"

1—WARPER, PIN, WITH TRACKS, 79"

1—WARPER, PINLESS TYPE, 84"

1—WARPER, ENTWISTLE BALL

8—WINDERS, OSWALD LEVER, bottle bobbin

1—WINDER, LAZENBY, Cop & Butt, 15 spindle

1—WINDER, LAZENBY, Cop & Butt, 60 spindle

1—TUBER, UNIVERSAL, 20 spindle, 6"

3—WINDERS, 24 spindle, 18" spools

2—WINDERS, COP, LINDSAY HYDE, 24 spindle, 7" pitch

1—WINDER, SIPP, 70 spindle

4—WINDERS, LESSONA

14—WINDERS, #90, 20 spindles

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1—Schofield Willow, motor driven
1—Crusher
1—Rotary Screen
1—Davis & Furber 2-cylinder Asbestos Card, 48x60 wooden cylinders, Bramwell Feed, Camel Back Intermediate Feed, Barker 2 apron rub condenser, 32 ends on 4 spools, belt driven
2—Whitin Model "D" Tape Drive Twisters, 7" gauge, 5½" ring, motor driven
1—Whitin Tape Drive Twister, 5½" gauge, 4" ring, motor driven
1—Saco-Lowell Tape Drive Twister, 6" gauge, 4½" ring, motor driven
1—Huber Tape Rolling Machine
2—Textile Machine Co. Rope Twisting Machines
1—Watson 2 spindle Rope Machine
2—60" Warp Compressor Co. Compressors with steel creels, 1—928 ends, 1—1312 ends
1—Compressor for 18" beam with 288 end creel, motor driven
17—C & K 2x1 box non-automatic Tape Looms, 72" between swords, with Gem heads, belt driven
4—C & K 12 space Looms, 15'2" between sides
1—Fletcher 10 space Loom
1—Fletcher 8 space Loom
6—Universal Winders, #6, #50, #90
1—2-Roll 72" Calender, Reeves Drive, motor driven

Detailed list furnished upon request

COCKER 5-CAN RAYON SLASHER

1—Cocker Machine & Foundry Company 5-can Rayon Slasher, cotton system, cans 23" diameter x 57" face, ball bearing, with Minneapolis-Honeywell automatic controls, monel metal size box with temperature and size level control, equipped with motor driven blower and hood to give equivalent of 7-can capacity, complete with Reeves Drives, Motors, Cut Marker, Stretch Control, etc., 1935 Model

OPENING AND PICKING

1—Saco-Lowell 45" Single Process Picker, hopper feeder, with Kitson blade beater and rolling up head
1—Saco-Lowell Bale Breaker, in line with 3 Whitin Upstroke Cleaners
1—Saco-Lowell #4 Bale Breaker, with 12' extended apron and Reeves variable speed drive
1—Saco-Lowell #3 Bale Breaker with top fan, 45" blending apron
1—Whitin Simplex Picker, Style 43, motor driven
4—Howard & Bullough Finisher Pickers
2—Kitson #07 Openers, 20", 3-blade beaters, 38" apron
2—Saco-Lowell Screen Sections for Vertical Openers, ball bearing
1—Howard & Bullough 42" Automatic Hopper Feeder, reconditioned
1—Saco-Lowell Horizontal Cleaner
2—Woonsocket Vertical Openers, perforated screen
1—Howard & Bullough Vertical Opener, grid cone with H & B screen section, apron delivery
1—Kitson Downstroke Cleaner, 42" wide, arranged for motor drive
1—Centrif Air Machine, bronze blades, fans top and bottom, arranged for 4 groove "V" belt drive
1—Sargent 97" Automatic Feeder and Preparer, new spike apron, rake reconditioned
1—Greenhalgh 52" Willow, 42" diameter cylinder, with fan

DRAWING

48—Deliveries Woonsocket Drawing, 6 delivery frames, 12" coilers, cork covered top rolls

COMBING

90—Whitin Combers, 8 delivery
35—Whitin Sliver Lap Machines, 20 ends
14—Whitin Ribbon Lap Machines, 4 deliveries

ROVING

2—Woonsocket 12x6 Slubbers, 84 spindles
6—Woonsocket 11x5½ Slubbers, 60 spindles
4—Howard & Bullough 11x5½ Slubbers, 72 spindles
2—Whitin 11x5½ Slubbers, 80 spindles
4—Howard & Bullough 10x5 Intermediates, 102 spindles
4—Woonsocket 9x4½ Intermediates, 144 spindles
6—Woonsocket 8x3½ Speeders, 160 spindles
24—Howard & Bullough 8x4 Speeders, 144 spindles
17—Saco-Lowell 7x3½ Speeders, 160, 184 spindles
38—Saco-Pettee 6x3 Speeders, 200 spindles

SPINNING

4—Whitin Spinning Frames, 1½" ring, 2¾" gauge, 176 spindles each, belt driven
3—Mason Spinning Frames, 2" ring, 3½" gauge, 240 spindles each, belt driven
14—Whitin Pease Model Wool Ring Spinning Frames, 1¾" ring, 3½" gauge, 180 spindles each, belt driven

TWISTERS

2—Whitin Twisters, 4½" ring, 6" gauge, 132 spindles
2—Whitin Twisters, 4" ring, 5" gauge, 128 spindles

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2—Whitin Twisters, 2¼" ring, 3½" gauge, 192 spindles
2—Howard & Bullough Twisters, 2" ring, 3" gauge, 240 spindles
5—Whitin Twisters, 1¾" ring, 3" gauge, 256 spindles

SPOOLING, WARPING AND WINDING

6—Easton & Burnham Spoolers, 5½" gauge, 6" traverse, 120 spindles, band driven, yarnometer tensions
13—Draper 54" Beam Warpers
1—Entwistle 72" Beam Warper, electric stop motions, balling attachments, 600-end "V" Creel
1—Entwistle 74" Long Chain Beamer
2—Foster #101 Cone Winders for wooden cones, 100 spindles each, motor driven
8—Foster #12 Cone Winders, 9½" gauge, 100 spindles, 6" traverse, semi-hi-speed
1—Foster #101 Model 56B Doubler, capacity 3 ends, makes tubes 8" long x 10" diameter, motor driven
4—Foster Model #25 Doublers, 60, 80, 100 spindles, motor driven
26—Universal #50 Cone Winders, 6 spindles, "L" head drive, motor driven
62—Universal #50 Winders, equipped for cones or tubes, belt driven

LOOMS

117—Draper Modified "D" Worsted Looms, 79½" reed space, Lacey tops, belt driven
6—Draper Model "L" Looms, 88" reed space, motor driven
234—Draper Model "E" Looms, 45½" reed space, single arch, with or without dobbies, belt driven
61—Crompton & Knowles 4x1 box Automatic Bobbin Changing Looms, 43½" between swords, C & K dobbies, belt driven
28—Draper Model "E" Looms, 43" reed space, 2-harness double cam shaft, roller tops, belt driven
54—Crompton & Knowles 4x1 box Looms, 43" between swords, electric stop motions, 25-harness dobbies, belt driven
40—Crompton & Knowles 2x1 box Looms, 46½" between swords, 25-harness double index dobbies, motor driven

CLOTH ROOM

8—Woonsocket 80" Nappers, 36-roll, double acting
1—Woonsocket 96" Napper, 36-roll, double acting
15—Curtis & Marble Inspecting Machines, 46", 48", 100", 114"
2—Curtis & Marble Cloth Tubing Machines, 40", 66"
1—Alexander & Garsed 51" Vertical Brushing Machine
10—Curtis & Marble Cloth Folders, 38", 42", 65" jaws
2—Bushnell toggle joint Cloth Presses

PRINTING MACHINES

3—Rice, Barton & Fales Cloth Printing Machines, single and three color
Back greige cans available for these machines

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3—Allen Kiers, with outside heaters and motor driven pumps
1—14-Strand Textile Finishing Machinery Co. Washer, rubber covered rolls, 120" face, rubber covered pit rolls
1—6-Strand Washer, rubber covered rolls 44" face
1—5-Strand Washer, rubber covered rolls 42" face
2—16" 2-rool Squeezers, rubber covered rolls
1—54" Singer, plate type, 2-burner, with Kemp gas unit
2—50" Scutchers
5—50" Dye Jiggs, stainless steel lined tanks, rubber covered top rolls, V-shaped tubs
1—50" Tommy Dodd or Backfilling Machine
1—54" 2-roll Padder, rubber and brass rolls, wooden tank, friction clutch pulley drive
1—52" 2-roll Padder, both rolls rubber covered, sheave pulley drive
1—47" 2-roll Mangle or Padder, rubber and brass rolls, belt driven
2—42" 2-roll Mangles or Padders, rubber and brass rolls, belt driven
1—21-Can Horizontal Dryer, copper cans 30" dia. x 96" face, removable journals, Mycock expander, swing folder
1—15-Can Horizontal Dryer, 10 copper cans, 5 tinned iron cans, 23" dia. x 93" face, belt driven
1—53" Winsor & Jerauld 90" Swing Tenter Frame, opens to 53" wide, W & J clips, stainless steel plates, electric guiders
2—Tenter Heater and Blower Units
1—43" Butterworth 5-roll Calender, 3 combination rolls, 2 steel steam heated rolls, Mycock expander, belt driven
1—61" Elliott & Hall Cloth Yardage Folder or Hooker, 1 yard fold
1—52" Parks & Woolson Cloth Rolling or Batching Machine for tubes or shell rolls, railway carriage, yardage counter
1—56" Simpson Batcher, steel rolls, cut-off attachments
1—300 H.P. General Electric Synchronous Motor, Type TS 600 RPM, 2200 volts, with directed connected exciter, all control equipment

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2 S&P 9x4½ Speeders 104 spdles.
2 Whitin 12x6 Slubbers 64 & 68"
2 F&J Twisters 180 spdles. 2" rings 3" gauge.
2 E&H Flat Folders with scray, 40" & 48' for Rayon
1 Hermas 58' 4 blades shear
2 Wor. Warp Compressor Spoolers 32" drum, stop motions
54 Dry Cans, tinned, 92" face, 6 stacks 9 cans ea.
5 50" Copper Dry Cans, no stands.
1 Draper Warper & Creel.
1 Textile 5 roll Calender 44" cloth, variable speed motor.
1 Bushnell Cloth Baler 60x42x29
1 Sturtevant Blower #29
1 Stur. Multivane Fan size 5
1 C&M 72" Cloth Cradle
1 40" Tolhurst Extractor, copper basket, belt drive.
1 Padder 96" face, 2 chilled Iron rolls.
1 Morrison Button Breaker 19 ball bearing brass rolls, 108" long 3" dia.
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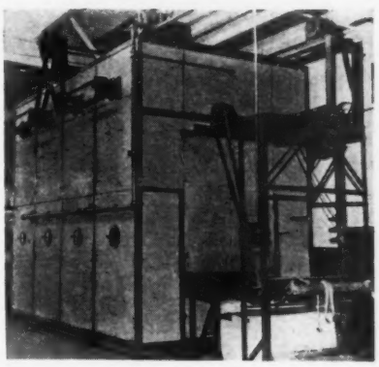

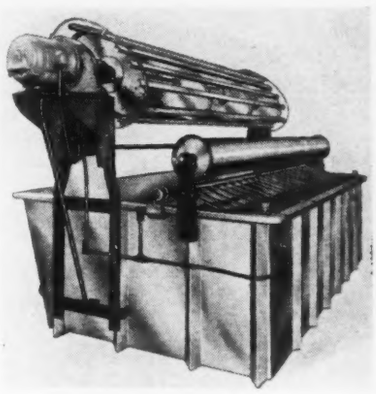

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DECATER, P&W 50" x 36" dia.
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DYEING MACHINE, Smith Drum, Pocket type
DYEING MACHINE, Smith Drum 60 arm

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EXTRACTORS, VV Copper basket 54"

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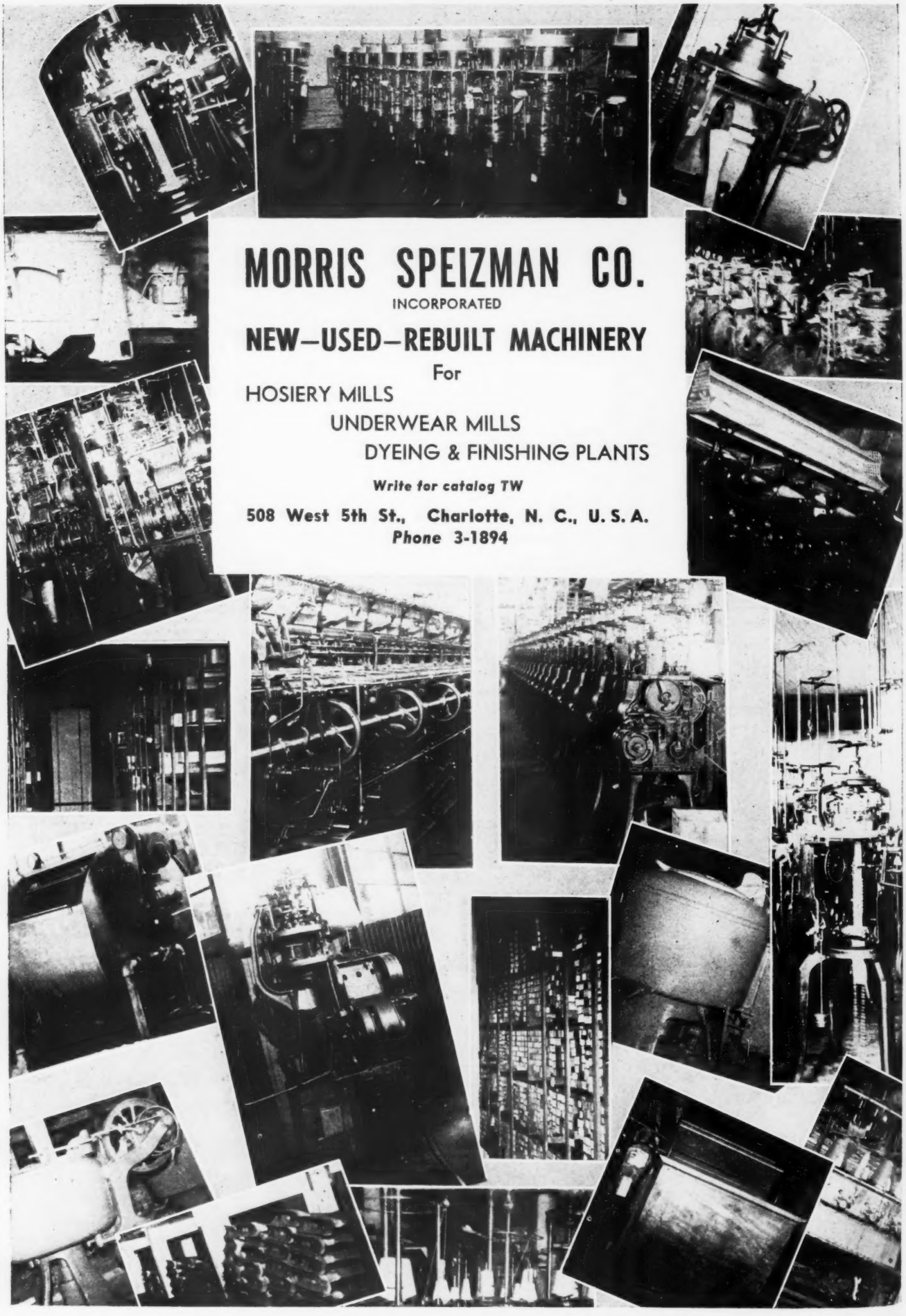

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64—Crompton & Knowles, 54", 4 x 4, motor driven

100—Crompton & Knowles jacquard machines 1304 hook, fine index, double lift.

100—Holten jacquards, 1304 hook, fine index, double lift.

150—Crompton & Knowles jacquards, 600 hook, double lift, coarse index

10—Sipp Warpers 72" and 83"

10—Eastwood Warpers 72" and 83"
Johnson's Slashers, 5 and 7 drum

60—Universal #90, 20 spindles each

50—Universal #50 Coners and Tubers, 6 spindles each
Atwood winders, 80 spindles, motor driven
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40—Fletcher spinners, double deck, top and bottom motor driven, 128 spindles each

60—Bahnson Humidifiers
Reeling machines
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PAWTUCKET, R. I.

HARRY STEPHENSON

IMPORTER, DEALER AND MANUFACTURER

TEXTILE MACHINERY AND APPLIANCES

New and Used

River Works, Andover, Mass.

IN PENNSYLVANIA IT'S

WHEELER MACHINERY FOR SALE

Cards & Feeds	Brushers	Warpers	Shears
Pickers	Doubling & Folding	Universal Winders	Cloth Folders
Twisters	Dry Cans 90"	Foster Winders	Mercerizers
Card Cutters	Chenile Cutters	Paper Slitters	Butts & Spools
Quillers	Spoolers	Extractors	Presses, Looms

It Pays to Keep in Touch with

TO BUY OR SELL **FRANK W. WHEELER CO.**

Oldest and Largest Dealer in Textile Machinery in Penna.

1837 E. Ruan St. **PHONES Jefferson 4771-4772** **Philadelphia 24, Pa.**

Twine Machinery
FOR SALE

9—Haskell & Dawes 2 Spindle 8" x 10" Formers

2—32 spindle Fairbairn Twine Polishing Machines

1—Silver & Gay 6 Spindle 8" Pitch Balling Machine

3—North Chesterton Machine Co. Ball Winders 12 Spindle each

Robert Solomon & Co., Inc.

Dealers in Textile Equipment

30 W. Houston St. New York, N. Y.

TEXTILE MACHINERY

TEXTILE MACHINERY

DOMESTIC - FOREIGN

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John Marshall
of Fall River

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HOSIERY MACHINES

KNITTERS - RIBBERS - LOOPERS
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RIBBER CYLINDERS & DIALS
UNION SPECIAL SEAMERS
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C. M. FRENCH

Commercial Trust Bldg. Philadelphia 2, Pa.

53—Whitin Band Drive Spinning Frames—3" Gauge—240 Spindles each—Metallic Thread Guides.
1—Hydrolite Machine
1—Model 4E Barber Colman Portable Tying-In Machine.
36—Model H High Speed Bahnson Humidifiers—550 volt—3600 R.P.M.
6000—Tape Drive Extra Long Blade Medium Whitin Spindles.
3000—Tape Drive Twister Spindles.
4500—Saco Lowell Tape Drive Idlers Complete.
1—Hermas Four Blade Shearing Machine for 45" Cloth.
3—Saco Lowell Tape Drive Twisters—3½" Gauge—2¼" Ring—Dry Twist—Ball Bearing Cylinders—Belt Drive—236 Spindles Each—3 Step Barber Colman Creels.
2—Whitin Spirawhirl Cleaners.
4—Saco Lowell Vertical Openers With Grid Bars.
5—Beam Warpers With Adjustable Creels.
1—Minic All Steel Motor Driven Baling Press—Suitable for Paper or Waste.
50,000—9" Medium Whitin Warp Bobbins.

"All inquiries are given our immediate attention."

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P. O. Box 1461 Phone 3-7764—3-7765 Charlotte 1, N. C.

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1-Textile Heavy Duty Calender, 2 Steel Rolls, Steam-heated, 11' 6" wide, 16" in Diameter;

1-Calender, 2 Rolls, 54" wide, 14" in diameter.

1-Sample Woolen Card

1-Opening Duster

FS-563, Textile World
330 West 42nd St., New York 18, N. Y.

ONE CURTIS & MARBLE TYPE E ROLLING & MEASURING MACHINE.

Will handle goods up to 72". Equipped with adjustable measuring attachment, with tail end stop, swing tension bars, cloth stand, winding bar for 2" paper tube—no motor. Also, equipped with one pair Coolidge cloth guiders.

Machine practically new. *Write to*

WORCESTER SPINNING & FINISHING CO.
Cherry Valley Mass.

FOR SALE
Scott & Williams Cylinders and Dials

Size	Cut	Gauge	Quantity
12	14	42	4
13	14	42	1
13	12	36	2
13	14	36	8
14	14	42	1
14	14	36	1
14	12	36	2
15	14	42	1
15	12	36	5
16	12	36	1

FS-535, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE
30" LOOMS

63—Draper 30" Model E used looms in good condition. Complete with Lacey top motions, pulleys, shafting, beams, etc. Located in South.

AMES BAG CO.
10 East 40th St. New York, N. Y.

DIESELS

ROBERT SCHOONMAKER
Port Washington, Long Island, N.Y
Phone Roslyn 1220

2 D & F MULES
384 Spindles Each, Built 1918

2¼ guage, equipped with bobbin-holders for 8½" plain bobbins and/or 8¾"—3 ring automatic filling bobbins.

In excellent Condition.

Can be seen in operation.

Available for March delivery.

Presently located in Canada.

Price $4,000 per spindle f.o.b. Mill floor.

Price includes belting and counter-shaft.

Subject to prior sale

FS-533, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE
Wildman Rib Cylinders and Dials

Size	Cut	Gauge	Quantity
13	14	48	1
14	14	48	1
14	12	36	2
15	14	36	3
15	12	36	1
16	14	48	2
16	12	36	4
16	8	24	1
17	14	48	1
17	12	36	10
18	14	48	3
18	12	36	5
19	14	48	1
20	14	48	12
20	8	24	8

FS-534, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE

Four Proctor & Schwartz automatic hosiery boarding machines equipped with aluminum forms for boarding women's hosiery.

FS-470, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE

20 — DRAPER MODEL-E-LOOMS
34 in. Wide
10 — DRAPER MODEL-E-LOOMS
36 and 38 in. Wide
Equipped with Stop Motions, Fittings Etc.
A.A.A. Deluxe Weavers
4907 North Bernard St.
Chicago 25, Illinois Phone Keystone 6175

FOR SALE

20—100 spindle Federal Spinners. Each machine equipped with individual motor drive. Reply to

FS-432, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE

1—Whitin Sliver Lap machine 9¾" metal top, 20 ends.
1—Whitin Ribbon Lap machine 11¾" leather top, 4 heads.

F. d'O. ABREU
86 Osborn St. New Bedford, Mass.

FOR SALE:
Dubied and C & F hand machines

14 and 16" BEDS.

Write to
FS-566, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE
ATWOOD TWISTERS

8B Twisters, belt driven. 2¼" cork covered take-up rolls.
3—machines, 100 spindles each
1—machine, 92 spindles
1—machine, 88 spindles
1—machine, 86 spindles
9—machines, 132 spindles each.
8—machines, 100 spindles each. Belt driven. 3" cork covered take-up rolls.
1—6Z Twister, 92 spindles, friction drive. 3" cork covered take-up rolls.
30—Universal 5-50 coners available for immediate sale.

FS-532, Textile World
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10 TON 46' WHITING HAND CRANE CABLEDRUM HOIST, COMPLETE

GOOD ORDER

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105 W. 55th Street, New York 19
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Electric Power Equipment

Distributors of Wagner Electric Motors and Transformers

423 Atlantic Avenue, Boston, Mass.

FOR SALE

40-Whitin Combers, Model "C"-8 lap
5-Whitin Ribbon Lappers-4 lap
5-Whitin Sliver Lappers-20 ends

This machinery in excellent working condition and can be seen on mill floor. Write

Crown Manufacturing Co.
P. O. Box 940, Pawtucket, R. I.

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that other readers of this paper can supply
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something you don't want
that other readers can use, advertise it in the

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FOR SALE

COMPLETE SKEIN DYEING UNIT

5—Klauder Weldon Skein Dyeing Machine, 50 lbs. to 350 lbs. capacity, also Extractor & Dryer

Excellent unit for new business enterprise.

Priced very low for quick sale.

STANDARD MILL SUPPLY COMPANY

1064-80 Main St. **Pawtucket, R. I.**

Perry 1037-38-39

FOR SALE!

2—Amoskeag 90' x 48" Tenters
1—Textile 60' x 50" Tenter
1—Textile 60' x 50" Tenter with P. & S. Housing
1—Butterworth 30' x 46" Tenter
1—Winsor Jerauld 30' x 52" Tenter
1—Alexander & Garsed 5 Bowl 43" Calender
1—Vertical Set of 21 Copper Dry Cans—23"x101" face
1—Horizontal set of 22 Copper Dry Cans—23"x105" face
1—Horizontal set of 7 Tinned Copper Dry Cans—23"x74" face
1—Textile 2 Roll 44" Face Mangle
1—Textile Backfiller 50" x 20" dia. Rubber Roll
1—Werner & Pfleiderer Mixer—33"x38"x31" Deep
6—Mixing Kettles 36"x36", 42"x42", 48"x42"
1—Noble & Wood Pulp Beater
1—Curtis & Marble 66" Disc Dampener
1—Simpson 50" Batcher with Cutter
3—Morton Raw Stock Dyeing Machines, 1—50# 2—1000#
1—Sargent 96" wide x 50' long Raw Stock Dryer
1—Rope Squeezer, Rubber Rolls 18"x14" face

JAMES E. FITZGERALD

Textile Machinery

10 Purchase Street, Fall River, Mass.

FOR SALE

2—T. W. 2 Bowl Backwashers and Dryers
1—Platt Card Balling Machine
4—T. W. Single Head Double Ball Gill Box 1/8" P.
1—60" D & F Traverse Grinder
1—60" Bare Cylinder Grinder
1—108" D & F Napper Grinder
1—Hunter Speedy Baling Press
1—Economy Wool Baling Press
1—Tolhurst 40" Extractor Copper Basket
2—D&F 300 sp. Mules 1—1 7/8", 1—1 3/4" ga.
1—D&F 450 sp. Mule 1 7/8" ga.
1—Woonsocket 86" Napper D.A. 24 rolls, ball bearing, belt drive
1—Woonsocket 86" Napper D.A. 24 rolls, B.B. Motor drive
1—Woonsocket 90" Napper D.A. 24 rolls, B.B. Motor drive
1—Woonsocket 90" Napper S.A. 20 rolls, B.B. Motor drive
2—Riggs & Lombard Continuous Cloth Washers, Motor drive
1—P&W 100" Vertical Brusher 6 cyls., Calender, Guides, Motor drive
1—Complete Set Cotton Combers:
2—Ribbon Lap Machines
2—Sliver Lap Machines
5—12 Head Tunstall Combers
1—Johnson 5 Can 60" Slasher
2—Saco-Lowell Fly Frames 144 sp. 8x3 1/2
100—Draper Mod. D Looms 45 1/2" between swords, Motor Drive
200—Stafford Shuttle Changing Looms 47 1/2" between swords, Motor drive

JAMES SPEED & CO., INC.

179 Summer Street, Boston, Mass.

L. J. McCAFFREY & SON

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SPINNING SUPPLIES

38,523—Worsted Caps — Bell, Conical, Straight—5 13/16" to 8 1/4" Length —1 15/16" to 3 1/8" dia.
1,503—Wors. Tubes—6 1/4", 6 3/8", 7 1/8"—3/4" & 1" Whorl.
4,033—Wors. Spinning Spindles—16", 17", 18", 19", 20" O. A. Length.
5,000—Rabbeth Modern Spinning Spindles — Saco-Lowell & Whitin — Tape Drive, Clutch.
6,387—Vertical Rings—1 3/4" to 2 3/4"—With C.I. Hold.
45,869—Flange Rings—1 1/4" to 2 9/16"
2,907—3" Vertical Twister Rings.

BOBBINS

454,580—7" & 8" Automatic Loom Bobbins —3 Ring
86,594—7" Triptod Bobbins
1,283—Drawing Spools — 14"x7" and 14"x8"
1,750—Jack Spools—32 1/2", 32 3/4", 33" with 10" Hds.—32 3/4"x11" Hds.—37"x6" Hds.—46"x5" Hds.
95,919—Twister Bobbins—6"x2"x1 3/4"—5" x2"x1 7/8"—8 1/2"x2 1/2"x1 7/8"
50,000—Woolen Automatic Loom Bobbins 8 3/4"

Box 495 **PAWTUCKET, R. I.**

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BUTTERWORTH CALENDER

7 ROLLS—80" FACE

8 Composition Rolls, 4 Steel Rolls, Hydraulic lift —water-cooled journals. Located in South.

AMES BAG CO.

10 EAST 40TH ST. NEW YORK CITY

- Printing Machines
- Dry Cans
- Calenders
- Quetches
- Extractors
- Tentering Frames
- Beamers & Tubers
- Doubling & Folding

Looms—Warpers—Winders—#90 & #50 Universals
Ribbon Machinery & Equipment

A. & M. BLANK CO., INC.

49 STATE ST. PATERSON, N. J.
Sherwood 2-1367 Lambert 3-9523

PARTS FOR 48" WOOLEN CARDS

Bramwell Feed-boxes; Doffer Combs; Metallic Breasts, Intermediary Feeds; Side-draw Units; 9" & 12" Ring Doffers; Barker 2-bank Rubb-apron Condensers; Spool Stands; Used Card Clothing-Fancies, Rings, Workers. Also: Waste-end Blower Return System; 60" Bramwell Feeds. 60" Traverse Grinder.

PAUL M. BROOMFIELD

Used & Rebuilt Wool Machinery

15 Hathaway St., Boston 10, Mass.

Tel.: Longwood 3980

SURPLUS MACHINERY LIST

ITEM 10998-B & 10999-B

2 WHITIN QUILLING MACHINES

304 Spindle—3 1/2" Gauge Flat Belt Drive from Motor Mounted on Machine Frame

ITEM 9838

1—48 end Single Drum Jack Spooler or Compressor made by Worcester Warp Compressing Machine Co. 48" wide with Jack Spool Stand, 5 digit Veeder Root yardage counter new lot of Jack Spools with 12" Heads

ITEM 10188

25000—9 x 4 1/2 Cotton Slubber Bobbins

ITEM 10189

75000—7 x 3 1/2 Cotton Speeder Bobbins

ITEM 10190 R

1—3 cylinder C. & A. Tiger all belt drive from 5 H.P. motor, 66" wide

ITEM 5594

1—4 cylinder P. & W. Tiger 66" wide, each cylinder arranged for individual motor drive

ITEM NEG

PAPER TUBES FOR CLOTH

900 tubes 37 1/2" l.
1 5/8" I.D.—2" O.D.
500 tubes 45" l.
1 3/8" I.D.—2" O.D.
550 tubes 39" l.
2 1/2" I.D.—3 1/2" O.D.
3,500 tubes 36" l.
1 1/2" I.D.—2 1/4" O.D.

Collins & Aikman Corp.

SALES & SALVAGE DIVISION

Located at Our Plant "L"

6th & Upland Aves.

Upland, Delaware Co., Pa.

Phone—Chester 4167

WANTED

Memo: **To: Executives of Dyeing, Finishing and Bleaching Plants**

As the country's largest dealers catering exclusively to the dyeing and finishing industry—we are in a unique position to offer highest possible prices on single items or complete units which you may have for sale.

A note to us, at the address below, or a phone call, will bring an authorized representative to your plant promptly.

ADVANCE MACHINERY CO., INC.

Textile Dyeing, Finishing and Printing Machinery

179-197 EAST 7TH STREET PATERSON 4, N. J.

Telephone ARmory 4-7068, 4-7069

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FOSTER WINDERS

Also Any Miscellaneous Parts and Attachments

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INTERESTED IN A 2 OR 3 ROLL PADDER, 90" WIDE, DIAMETER OF ROLLS 18"—24". **ALSO INTERESTED IN COPPER CANS WITH JOURNALS** 84"x23" SIPHON SYSTEM.

W-543, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED:

DUBIED, SEIFERT & DONNER and GROSSER widening machines

6, 7 and 8 gauge. *Write to*

W-565, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

300 and 500 lbs. Housong dye pots and cages for raw stock dyeing. Also, 1000 lbs. automatic wool baler. Also, large exhaust fans. Apply

W-437, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

2 WOOLEN OR WORSTED CARDS

60-Inch Diameter—60-Inch Face
All Metal

W-489, Textile World
330 West 42nd St., New York 18, N. Y.

One Power Perch—60" wide suspension type preferred
Two Parks & Wolson rolling and Measuring Machines
One Textile Scutcher—roller bearing
Two Whitin Plush Quillers

NORTHWOOD TEXTILE MILLS
Orthodox and Large Sts.
FRANKFORD, PHILA., 24, PA.

Coal Unloading Conveyor

WANTED

State condition, size, kind of power and price—

W-524, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

One used velvet carpet loom complete with accessories, 27" wide, suitable for weaving Wilton Carpets. Furnish description and advise where the loom may be inspected.

W-549, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

ONE SET WOOLEN CARDS

60 x 60 with ring doffer.

Also small three or four bowl wool scouring machine complete.

J. O. BALLARD & CO., Malone, N.Y.

WANTED

Nylon Sizing Equipment Universal or Foster, require from 75 to 100 spindles.

W-496, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

Knitting machine for undershirts from 16" to 24" Diam., and 12, 13 or 14 cuts

Address

W-545, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED
10 inch

Circular Knitting Machines

Automatic to make Snuggies IXI—tuck stitch 11 to 12 cut preferred

W-516, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED
(1 or 2)

RUBBER COVERING MACHINES

Also, Universal Winder for same
Give full particulars, price, etc.

LEEDON WEBBING CO.
Box 725, Pawtucket, R. I.

WANTED

100 Draper looms, 36" to 45" Reed Space, Midget feeler, motor driven.

Address

W-546, Textile World.
330 W. 42nd St., New York 18, N. Y.

IF THERE IS

Anything you want

that other readers of this paper can supply

OR—

Something you don't want

that other readers can use, advertise it in the

SEARCHLIGHT SECTION

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2—8 Spindle or 10 Spindle 14x7 Open drawing Boxes
1—8 Spindle 14x8 Open drawing Box
2—60 Spindle 10x5 Cone Reducers
1—8 or 10 Spindle 14x9 Cone drawing Box

Please address communications to

HOWARD IMPORT & EXPORT CO.
10 West 33rd Street New York, N. Y.

WANTED!

OPERATING PRINTING PLANT

Of 6 to 10 Machines with Bleaching, Dyeing and Finishing Equipment.

W-550, Textile World
330 West 42nd Street, New York 18, N. Y.

WANTED

WANTED TO BUY

Rayon Piece Goods

SATINS AND TAFFETAS UP TO 54" WIDE

GREY OR DYED AND FINISHED

W-538—Textile World—330 W. 42d St., New York, N. Y.

WANTED

Worsted Yarn Spinning Mill

Bradford System

4000 Spindles, Cap, Ring or both with proper additional twister spindles. Should be balanced to make hand knitting, machine knitting and some counts weaving yarns. Located preferably in New England. Submit full particulars.

W-567, Textile World
330 West 42nd Street, New York 18, N. Y.

Long Established Reputable Concern with Substantial Capital

WILL BUY FOR CASH

Assets, Capital Stock, Family Holdings of

INDUSTRIAL PLANTS, MFG. DIVISIONS, UNITS

Among other considerations, you may realize certain desirable tax advantages

We are principals and act only in strictest confidence, retaining personnel wherever possible. Address

Box 1222, 1474 Broadway, New York (18), N. Y.

If You Don't See What You Want

—ask for it!

Quoting the storekeeper's old slogan: "If you don't see what you want—ask for it." Ask the advertisers. They are constantly adding to their stocks and may have acquired just what you need. Or, shall we ask them for you? Write the

Departmental Staff

TEXTILE WORLD

330 W. 42nd ST., NEW YORK 18, N. Y.

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.
91 Oliver St. Boston, Mass.

WANTED

Surplus

Chemicals, Dyes, Gums, Oils, Waxes, Greases, Pigments, Residues, By-Products, Wastes

W-270, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED TO PURCHASE

By two ex-service men with textile mill experience

SMALL MILL

suitable for converting cotton yarns into thread or twine. Prepared to pay cash in full. Give full particulars in reply.

W-540, Textile World
330 West 42nd St., New York 18, N. Y.

YARNS WANTED

Wanted to purchase surplus yarns of all types — cotton, rayon, acetate, nylon, silk, wool, spuns, and blends.

W-474, Textile World
330 West 42nd St., New York 18, N. Y.

WOOLEN YARN WANTED

We want to purchase or have you spin for us on commission basis 5,000 pounds weekly, all 3¼ run or 3¾ run yarn, virgin wool.

We are a long established firm and will prove to be a valued account for the future.

CW-531, Textile World
330 West 42nd St., New York 18, N. Y.

ATTRACTIVE OPENINGS

We have clients who have asked us to furnish the following men:

General Manager plush mill
General Manager print works
Manager woolen-worsted yarn and cloth mill. Very fine position
Asst. Agent cotton mill $7500 year
Superintendent woven felt mill
Superintendents for worsted and woolen yarn mills
Shoddy Mill Manager
Boss Finisher, knitted and woven woolen-worsted cloths
Cotton mill superintendents, assistant superintendents, overseers carding, spinning and weaving for mills in Cuba, Puerto Rico and South America
Master Mechanics and plant engineers
Silk-rayon technicians for positions in New York City
Accountants and time study engineers
Assistant power plant superintendent (South) $450 month
Boss Spinners woolen mules and frames
Woolen manufacturer who understands raw wools, buying, grading, etc. for cotton system
Woolen carders $60—$100 week
Superintendent Southern seamless hosiery mill
Sweater mill manager
Overseer weaving velvets and plush (South)
Salesman dyestuffs and chemicals
Chemists, dyers, colorists
Fixers for sewing, hosiery and underwear knitting machines
Textile school graduates with or without mill experience
Garnett men—Loom Fixers
Superintendent cotton rayon dyeing, bleaching and finishing

CHARLES P. RAYMOND SERVICE, Inc.

294 Washington St., Boston 8, Mass.

Over 45 years' confidential employment service for men seeking positions and employers seeking men.

Position Open

We have a very fine opening for a recent textile school graduate, who would like to be employed with an old established, successful mill. Splendid opportunity for experience and advancement.

CHARLES P. RAYMOND SERVICE
INC.
294 Washington St. Boston, Mass.

POSITIONS VACANT

KNITTER AND Mechanic thoroughly experienced all types flat full automatic knitting machines. Able to knit in test and set up. Salary and bonus, opportunity. Apply Ainslie Knitting Machine Co., Inc., 750 Grand Street, Brooklyn, N. Y.

ASSISTANT DYER for Rayon piece goods dyehouse, Jigs & Boxes. P-551, Textile World, 330 W. 42nd St., New York 18, N. Y.

POSITIONS WANTED

WOOLEN MILL Superintendent and designer desires position with first class mill. 20 years practical experience in the woolen industry. Well versed on manufacturing all types of woolen clothes, (Men's & Ladies' Wear, blankets). PW-528, Textile World, 520 N. Michigan Ave., Chicago 11, Ill.

THROWSTER OF many years experience in throwing silk, rayon crepe, hosiery yarn and a variety of yarns for the embroidery and underwear trade, desires connection with a reputable concern. PW-530, Textile World, 330 W. 42nd St., New York 18, N. Y.

RAYON AND Synthetic yarn Throwster desires position in plant where conditions are unfavorable, have had ten years practical experience also technical training. Desires to put plant on paying basis, training help within industry. PW-552, Textile World, 330 W. 42nd St., New York 18, N. Y.

RAYON AND Novelty Yarn Silk yarn Superintendent available for your service. 48 years old, married with 34 years experience in yarn manufacture. Was erecting road mechanic on Atwood and Universal and Whitin Machines. Later machine shop foreman for large throwster operating several plants. Give type of work and salary in first letter. PW-553, Textile World, 330 W. 42nd St., New York 18, N. Y.

WANTED POSITION as Overseer or Superintendent Weaving, on Crompton-Knowles or Drapers. 22 years experience on Rayon or Cotton Fabrics. Plain or Dobby weaves. Will accept position anywhere in the States. PW-554, Textile World, 330 W. 42nd St., New York 18, N. Y.

SUPERINTENDENT OF yarn mill at present employed desires to make a change. 25 years experience producing carded combed and blended yarns for hosiery and weaving trade. PW-555, Textile World, 330 W. 42nd St., New York 18, N. Y.

TEXTILE ENGINEER — Executive. College graduate, professionally trained in Business and Textile Schools, ten years Executive experience. Specialization in the manufacturing of silk and synthetic yarns, broad cloths and narrow fabrics, designing, analytical chemistry, and cost estimation. Experienced in Labor Relations capable of taking responsibility for medium sized Production Organization. Prefers position in Pennsylvania or New York area but will consider Southern area. PW-556, Textile World, 330 W. 42nd St., New York 18, N. Y.

(Continued on page 313)

AN IMPORTANT POSITION IS NOW OPEN

Manufacturer of papermakers felts is interested in contacting man who would qualify as superintendent. The right man for this position should have a knowledge of the designing and the manufacturing of papermakers felts. He should be able to handle men. This is an exceptional opportunity for an exceptional man.

W-564, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED:

RESEARCH CHEMIST

To have charge of research laboratory in large textile print plant located in the south. Thorough chemical training essential also fundamental knowledge of Resins & Related products. Practical experience in printing & dyeing of textiles preferable but not absolutely necessary. Must have ability to create & develop ideas. This is an excellent opportunity for the right man. Salary commensurate with qualifications. State age, education, experience and references.

P-562, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

Knitting machine fixer

with latch needle experience and knowledge of Scott & Williams, Brinton & Wildman Machines. Wanted by large upstate New York Underwear Manufacturer. State experience. All correspondence confidential. Write

P-542, Textile World
330 West 42nd St., New York 18, N. Y.

Foreman

For Universal #50 Cone Winders and Universal #250 Sizing Machines.

Must be capable of handling 100 employees and have full knowledge of mechanical repair and adjustment of these machines.

This position pays a good salary and bonus.

Write, giving education and experience and names of former employers.

P-541, Textile World
330 W. 42nd St., New York 18, N. Y.

CHEMISTS

Active, Confidential Service Both To Employer and Employees
We Invite Your Investigation
MISS GLADYS HUNTING—Counselor

Shay Employment Agency
30 W. Washington Chicago 2, Ill.

WANTED

FINISHER

for knitted overcoating both fleece cloth and cotton back cloth. We need a man who understands all the machinery used in both wet and dry finishing. We are an old established mill and the position will be permanent for the right man.

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CW-433, Textile World
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POSITIONS WANTED
(Continued from opposite page)

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VETERAN TEXTILE Engineer. No actual mill experience. Anxious to start in field. Ambitious and conscientious worker. PW-561, Textile World, 330 W. 42nd St., New York 18, N. Y.

SELLING OPPORTUNITIES WANTED

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WANTED . . . SEVERAL sets of drying cans. W-559, Textile World, 330 W. 42nd St., New York 18, N. Y.

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RA-537, Textile World
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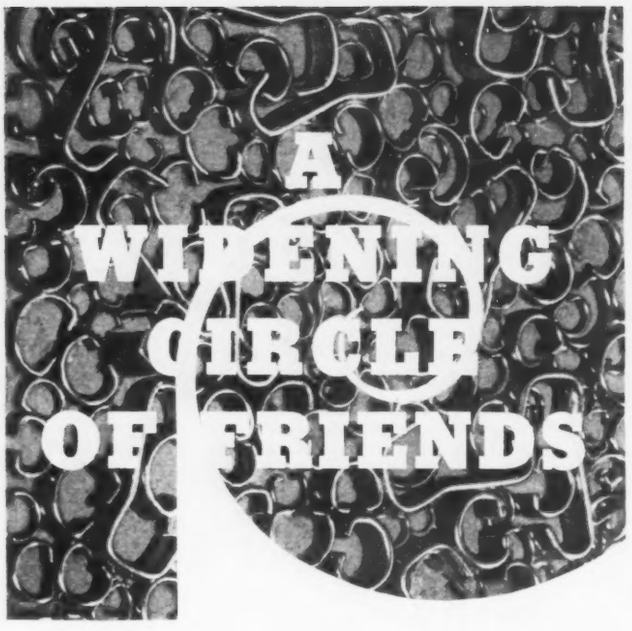

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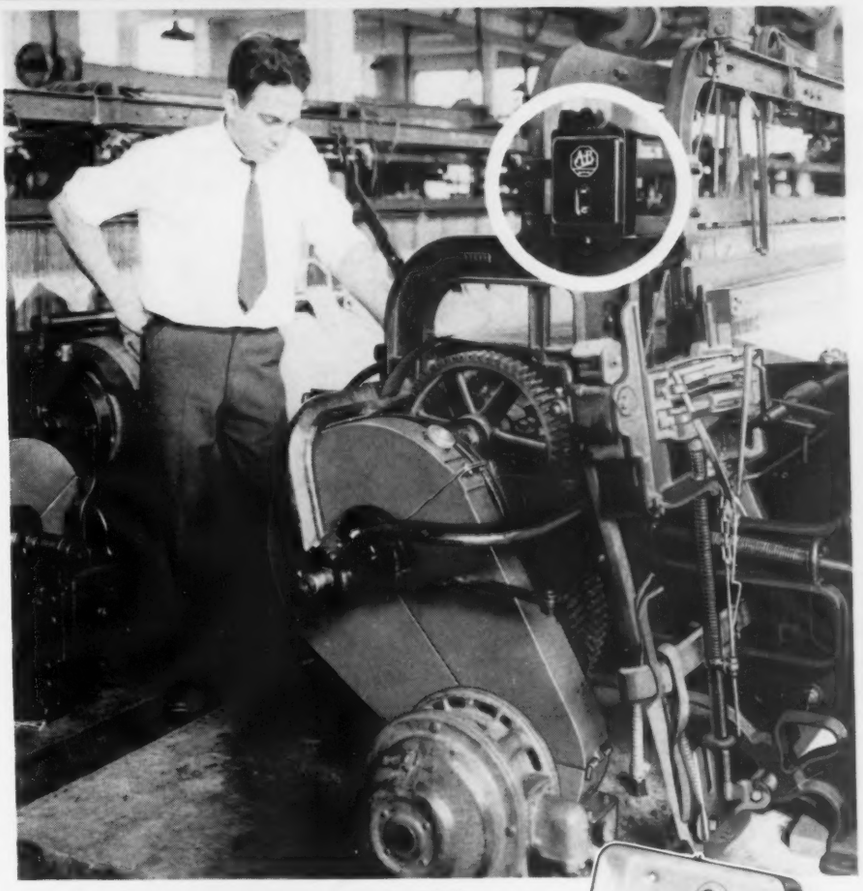

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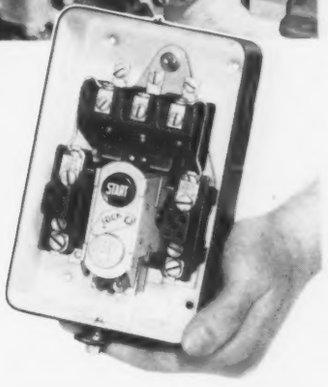

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